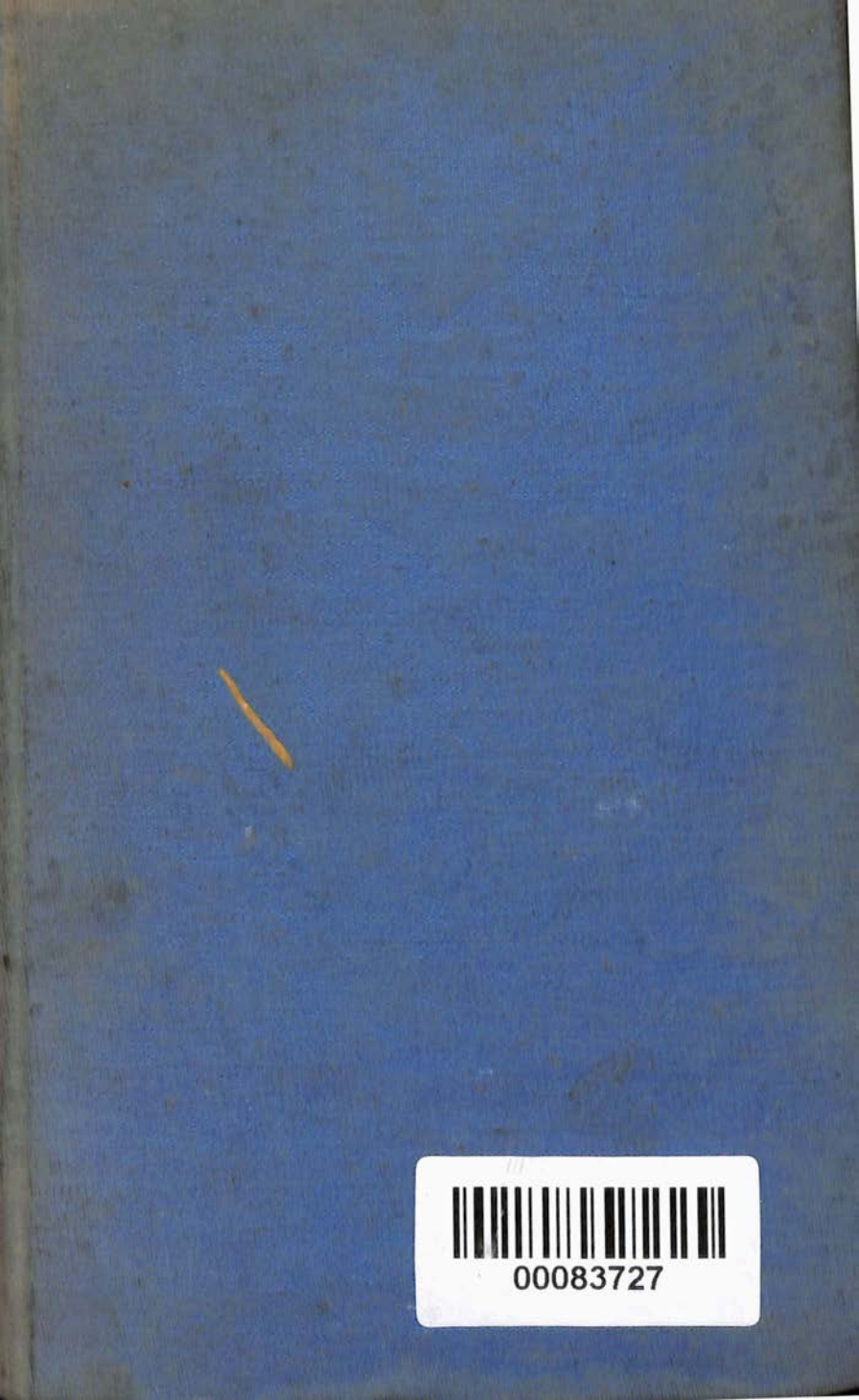
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TRAVELS

IN

SWITZERLAND,

AND IN THE

COUNTRY OF THE GRISONS:

IN A

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SERIES OF LETTERS

TO

WILLIAM MELMOTH, Esq.

W. e. 200 a

FROM

WILLIAM COXE, M.A. F.R.S. F.A.S.

Rector of BEMERTON; Member of the Imperial Oeconomical Society at ST. PETERSBURGH, of the Royal Academy of Sciences at COPENHAGEN, and Chaplain to His Grace the DUKE of MARLBOROUGH.

IN THREE VOLUMES.

THE SECOND EDITION.

VOL. II.

LONDON:

PRINTED FOR T. CADELL, IN THE STRAND.

1791.

Nature! great parent! whoſe unceaſing hand
Rolls round the ſeaſons of the changeful year,
How mighty, how majeſtic are thy works!
With what a pleaſing dread they ſwell the ſoul!

THOMSON'S SEASONS. Winter, Ver. 105,

00083727

TO

SAMUEL WHITBREAD, Esq. M.P.

SIR,

AS the opportunity of reviſing and augmenting this part of my Letters on Switzerland, and of rendering them more worthy of public inſpection, was entirely owing to the honour of accompanying your Son upon his Travels, to you I beg leave to inſcribe this Second Volume, as a public mark of that eſteem and regard, with which I am,

SIR,

Your moſt obedient,

and obliged humble ſervant,

WM COXE.

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LETTERS, &c.

LETTER 36.

Paſſage of the Tete Noire—Col de Balme—Mont Blanc—Its great Elevation.

Geneva, Auguſt 28.

UPON quitting Trient, we traverſed ſome narrow vallies, through foreſts of pines, by the ſide of a ſmall but impetuous torrent, which takes its riſe from the glacier of the ſame name. The road, which is very rugged, is carried over the ſteep crags of a mountain called *La Tete Noire*. A little way from Trient we entered the duchy of Faucigny, ſubject to the king of Sardinia. Our road was very rough, till we arrived at the vale of Chamouny; the great mountains and glaciers of Savoy riſing majeſtically before us.

Another way leads from Trient to Chamouny over the *Col de Balme*. I paſſed it on a mule the 7th of September 1785; it is exceedingly ſteep, but not dangerous, as repreſented by many travellers; for I did not even find it neceſſary to diſmount. The path, which is in no part bare rock, runs through a thick wood that clothes the ſides of the mountain. We ſet off from Trient on this expedition about half paſt four, with the expectation of ſeeing the ſun riſe on the ſummit of Mont Blanc, but were diſappointed; for we did not reach the Col de Balme in leſs than two hours, and day had already begun to break. We enjoyed, however, from the ſummit an extenſive proſpect, which many travellers conſider as the moſt ſublime view in all Switzerland: on one ſide it commands the Vallais, the alps of St. Bernard, and the diſtant mountains of the cantons of Underwalden and Berne; the other comprehends Mont Blanc and the circumjacent heights. I obſerved the *Point de Mouſſon*; the *Mortine*, ſupporting on its top the glacier of *Buet*, on which M. de Luc made his celebrated experiments to aſcertain the ſtate of the atmoſphere; the *Point de la Tour*; *Les Aiguilles d'Argentiere*; the *Aiguille de Midi*, a piked rock ſtarting out of a large maſs of ſnow; and, laſtly, *Mont Blanc* itſelf. The higheſt point

of this gigantic mountain is in the ſhape of a compreſſed hemiſphere, and is called from its form *La Boſſe du Dromedaire*; from that point it gradually ſinks, preſents a kind of concave ſurface of ſnow, in the midſt of which is a ſmall pyramid of ice; it then riſes into a ſecond hemiſphere, called by ſome *Little Mont Blanc*, but with more propriety by others *Le Dome du Milieu*, or the *Middle Dome*; thence it deſcends into another concave ſurface terminating in a point, indiſcriminately ſtyled by the natives *Aiguille de Gouté*, *Point de Gouté*, and *Dome de Gouté*, and which I ſhall name the *Dome of Gouté:* from that dome it ends abruptly, and loſes itſelf amid the mountains that bound the vale of Chamouny.

Mont Blanc is particularly diſtinguiſhed from other mountains, by having its ſummit and ſides clothed to a conſiderable depth with a mantle of ſnow, almoſt without the intervention of the leaſt rock to break the glare of the *white* appearance; from whence its name is derived. This circumſtance frequently deceives the eye unaccuſtomed to ſuch objects, and in many ſituations renders it leſs lofty in appearance, than it is in reality. Although its ſummit was elevated more than ſeven thouſand feet above the ſpot

where I ſtood, yet it did not impreſs me with that aſtoniſhment which might be expected from its ſuperior height and magnitude above the circumjacent mountains. I was indeed more ſtruck with the firſt view of the Schreckhorn from the top of the Scheidec, than of Mont Blanc from the Col de Balme. The ſummit of Mont Blanc being of a roundiſh form, and covered with ſnow, unites beauty with grandeur; whereas the Schreckhorn being piked, naked, and its ſhagged ſides only ſtreaked with ſnow, its grand characteriſtics are ruggedneſs and horror; and hence, indeed, it derives its name of Schreckhorn, or the *Peak of Terror**. But Mont Blanc ſoon re-aſſumed its real importance, ſeemed to increaſe in ſize and height, and ſolely attracted our attention, until we entered the vale of Chamouny.

You, who are totally unacquainted with alpine ſcenes, may, perhaps, conceive a faint idea of the elevation of this gigantic mountain, on be-

* The traveller will recollect, that I am here deſcribing Mont Blanc, as obſerved from the Col de Balme, and the vale of Chamouny. Thoſe who have ſeen it from the valley of Aoſt aſſure me, that it is not on that ſide covered with a mantle of ſnow, but exceeds even the Schreckhorn in ruggedneſs and horror.

ing

ing informed, that the mantle of ſnow, which appears to cover its top and ſides, exceeds an altitude of four thouſand feet perpendicular, and nine thouſand feet in a horizontal direction from the *Dome of Goutê* to the ſummit; and that the height of the ſnow and ice, eſtimated from the ſource of the Arveron, at the bottom of the glacier of Montanvert, to the ſummit of Mont Blanc, cannot be leſs than twelve thouſand perpendicular feet, or near three times as high as Snowdon, in North Wales.

Five glaciers extend into this vale of Chamouny, and are ſeparated from each other by foreſts, corn-fields, and meadows; ſo that large tracts of ice are blended with cultivation, and perpetually ſucceed each other in the moſt ſingular and ſtriking viciſſitude. Theſe glaciers, which lie chiefly in the hollows of the mountains, and are ſome leagues in length, unite at the foot of *Mont Blanc*; the higheſt mountain in Europe, and probably of the antient world.

According to the calculations of Mr. De Luc, (by whoſe improvement of the barometer, elevations are taken with a degree of accuracy before unattainable), the height of this mountain above the level of the ſea is 2,391½ French

toiſes, or 15,304 Engliſh feet *; or, according to Sir George Schuckborough, of 15,662 feet; which gives a difference of only 358 feet.

Mr. de Luc having found the altitude of the *Buet*, from thence took geometrically the elevation of *Mont Blanc*. The labours of this celebrated naturaliſt, and his rules for computing heights by the barometer, are to be found in his very valuable treatiſe, " *Sur les Modifications de l'Atmoſphère.* Theſe rules are explained, and his tables reduced to Engliſh meaſure, by Dr. Maſkelyne, R. A.; and ſtill more fully by Dr. Horſley: both theſe treatiſes are publiſhed in the Philoſophical Tranſactions for the year 1774.

The accuracy of the barometrical meaſurements made by Mr. de Luc, was verified by Sir George Schuckborough, in a number of ingenious experiments towards aſcertaining the elevation of ſeveral mountains of Savoy, a ſhort time

* In reducing the French toiſe, which is equal to ſix French feet, to Engliſh meaſure, I have conſidered the proportion of the Engliſh to the French foot as 15 to 16. Its real proportion, according to the accurate calculation of Sir George Schuckborough, is $1\frac{12}{64}$, or 15 to 16 and a ſmall fraction: but the error in my calculation being not one toiſe in a thouſand, in order to prevent confuſion, I have omitted the ſmall fraction.

before I arrived at Geneva. He followed Mr. de Luc's method; computed the heights of ſeveral mountains, reciprocally, by barometrical and geometrical obſervations; and perceived that the former coincided almoſt exactly with the latter. Having found the elevation of the ſummit of the *Mole* above the ſurface of the lake of Geneva, he took from thence the geometrical altitude of *Mont Blanc.* During the courſe of theſe experiments, he was enabled to correct ſome trifling errors that had crept into Mr. de Luc's calculations; to improve ſtill further the diſcoveries of the latter; and has facilitated the means of taking elevations, by ſimplifying the tables and rules neceſſary for that purpoſe.

I am convinced, from the ſituation of *Mont Blanc*, and from its ſuperior altitude above the ſurrounding mountains, that it exceeds the loftieſt point in Switzerland, which, beyond a doubt, is, next to *Mont Blanc*, the moſt elevated ground in Europe. That it is higher than any part of Aſia and Africa, is an aſſertion which can only be proved by comparing the judicious calculations of modern travellers, with the exaggerated accounts of former writers; and by ſhewing, that there is probably no mountain in thoſe two quarters of the globe, the al-

titude whereof, when accurately taken, ſurpaſſes 15,000 feet.

Perhaps in no inſtance has the imagination of man been more given to amplification, than in aſcertaining the heights of the globe. Gruner, in his deſcription of the Swiſs glaciers, has mentioned the elevation of ſome remarkable mountains, agreeably to the calculations of ſeveral famous geographers and travellers, both antient and modern:

	Toiſes.	Eng. Feet.
According to Strabo, the higheſt mountain of the antient world was about -	3,411	21,830
According to Riccioli — —	58,216	372,382
According to Father Kircher, who took the elevations of mountains by the uncertain method of meaſuring their ſhadows,		
Ætna is — — —	4,000	25,600
The Peak of Teneriff — —	10,000	64,000
Mount Athos — —	20,000	128,000
Lariſſa in Egypt — —	28,000	179,200

But theſe calculations are evidently ſo extravagant, that their exaggeration muſt ſtrike the moſt common obſerver. If we conſult more modern and rational accounts; it appears, that the Peak of Teneriff and Ætna have been frequently ſuppoſed to be the higheſt points of the globe. The former is eſtimated by ſome natural

tural philoſophers, to be 3,000 toiſes, or 19,200 feet above the level of the ſea; but, according to Feuillé, this elevation is reduced to 2,070 toiſes, or 13,248 feet; whereas Ætna, by the accurate computations of Mr. de Sauſſure, riſes only * 1,672 toiſes, or 10,700$\frac{4}{5}$ feet above the ſea. Hence it will appear, that there are no mountains, except thoſe in America, the elevation

* According to Sir George Schuckborough, 1,672 toiſes, or 10,954 feet: who ſays, "I have ventured to compute the "height of this celebrated mountain from my own tables, "though from an obſervation of Mr. de Sauſſure, in 1773, "which that gentleman obligingly communicated to me. "It will ſerve to ſhew that this volcano is by no means the "higheſt mountain of the old world; and that Veſuvius, "placed upon Mount Ætna, would not be equal to the height "of Mont Blanc, which I take to be the moſt elevated point "of Europe, Aſia, and Africa."

I am happy to find my conjectures corroborated by that ingenious and accurate obſerver.

	Feet.
Height of Ætna, according to Sir George —	10,954
Of Veſuvius, according to Mr. de Sauſſure —	3,900
Of both together — — —	14,854
Height of Mont Blanc, according to Sir George	15,662
Difference,—or the height of Mont Blanc above that of Ætna and Veſuvius united — —	808

For ſtill further information on this curious ſubject, the reader is referred to Mr. Trembley's *Analyſe d'Experiences ſur la Meſures des Hautures, in Sauſſure's Voyages dans les Alpes*, vol. ii. p. 616.

whereof,

whereof, according to Condamine, ſurpaſſes 3,000 toiſes, or 19,200 feet, which are equal to the altitude of Mont Blanc.

In order, however, to determine with abſolute certainty that Mont Blanc is the higheſt point of the old world, it would be neceſſary to eſtimate, by the ſame mode of menſuration, Mont Blanc, the Schreckhorn, the Peak of Teneriff, the mountains of the Moon in Africa, the Taurus, and the Caucaſus.

The chain of the Caucaſus has long been deemed the higheſt mountains of Aſia; and ſome philoſophers, upon conſidering the great ſuperiority of the eaſtern rivers over the European, both in depth and breadth, have drawn a preſumptive argument, that the Aſiatic mountains are much more lofty than thoſe of Europe. But conjectures are now baniſhed from natural philoſophy: and, until it ſhall be proved from undoubted calculations, that the higheſt part of the Caucaſus riſes more than 15,000 feet above the level of the ſea, Mont Blanc may be fairly conſidered as more elevated.

LETTER 37.

Glacier of Boſſon—Montanvert—Expedition acroſs the Valley of Ice.

AUGUST 23d, we mounted by the ſide of the glacier of Boſſon, to *les Murailles de glace*, ſo called from their reſemblance to walls: they form large ranges of ice of prodigious thickneſs and ſolidity, riſing abruptly from their baſe, and parallel to each other *. Some of theſe ranges appeared to us about a hundred and fifty feet high; but, if we may believe our guides, they are four hundred feet above their real baſe. Near them were pyramids and cones of ice of all forms and ſizes, ſhooting to a very conſiderable height, in the moſt beautiful and fantaſtic ſhapes. From this glacier, which we croſſed without much difficulty, we enjoyed a fine view of the vale of Chamouny.

The 24th. We had propoſed ſallying forth this morning very early, in order to viſit the valley of ice, in the glacier of Montanvert, and to penetrate as far as the time would admit; but the

* In 1785, theſe *murailles de glace* no longer exiſted.

weather

weather proving cloudy, and likely to rain, we deferred our departure till nine. Having procured three guides, we aſcended on horſeback about three miles: we were then obliged to diſmount, and ſcrambled up a ſteep and rugged path, called "the road of the *cryſtal-hunters*." From the ſummit of the Montanvert we deſcended to the edge of the glacier; and made a refreſhing meal upon ſome cold proviſion which we brought with us. A large block of granite, called "*La pierre des Anglois*," ſerved us for a table; and near us was a hovel*, where thoſe, who make expeditions towards Mont Blanc, frequently paſs the night. The ſcene around us was magnificent and ſublime; numberleſs rocks riſing boldly above the clouds, ſome of whoſe tops were bare, others covered with ſnow. Many of theſe peaks gradually diminiſhing towards their ſummits, end in ſharp points, and are called *Needles*. Between theſe rocks, the valley of ice ſtretches ſeveral leagues in length, and is nearly a mile broad; extending on one ſide towards Mont Blanc, and, on the other, towards the plain of Chamouny.

* Since my firſt expedition, Mr. Blair, an Engliſh gentleman, has built a more commodious wooden hut, which, from him, is called Blair's Cabin.

The

The names of the principal needles are, Aiguilles de Midi, de Dru, de Bouchard, de Moine, de Tacul, de Charmeaux; and the five glaciers, that ſtretch towards the plain of Chamouny, and unite at the foot of Mont Blanc, are called Tacona, Boſſons, Montanvert, Argentiere, and Tour.

After we had ſufficiently refreſhed ourſelves, we prepared for our adventure acroſs the ice. We had each of us a long pole ſpiked with iron; and, in order to ſecure us as much as poſſible from ſlipping, the guides faſtened to our ſhoes *crampons*, or ſmall bars of iron, provided with four ſmall ſpikes of the ſame metal. The difficulty of croſſing theſe valleys of ice, ariſes from the immenſe chaſms. We rolled down large ſtones into ſeveral of them; and the great length of time before they reached the bottom, gave us ſome conception of their depth: our guides aſſured us, that in ſome places they are not leſs than five hundred feet deep. I can no otherwiſe convey to you an image of this body of ice, broken into irregular ridges and deep chaſms, than by comparing it to waves inſtantaneouſly frozen in the midſt of a violent ſtorm.

We began our walk with great ſlowneſs and deliberation, but gradually gaining courage and confidence as we advanced, we ſoon found that

we

we could ſafely paſs along thoſe places, where the aſcent and deſcent were not very conſiderable, much faſter even than when walking at the rate of our common pace: in other parts we leaped over the clefts, and ſlid down the ſteeper deſcents. In one place, where we deſcended and ſtepped acroſs an opening upon a narrow ridge of ice ſcarcely three inches broad, we were obliged to tread with peculiar caution: for on each ſide were chaſms of a great depth. We walked ſome paces ſideways along this ridge; ſtept acroſs the chaſm into a little hollow, which the guides contrived on purpoſe for our feet; and got up an aſcent by means of ſmall holes which we made with the ſpikes of our poles. This account appears terrible; but at the time we had not the leaſt apprehenſions of danger, as the guides were exceedingly careful, and took excellent precautions. One of our ſervants had the courage to follow us without *crampons*, and with no nails to his ſhoes; which was certainly dangerous, on account of the ſlipperineſs of the leather when wetted.

We had now almoſt reached the oppoſite ſide, when being ſtopped by a broad chaſm, we were obliged to make a circuit of above a quarter of a mile, in order to get round it. This will give you ſome idea of the difficulty attending excurſions

ſions over ſome of theſe glaciers: and our guides informed us, that when they hunt the chamois and the marmots, theſe unavoidable circuits generally carry them ſix or ſeven miles, when the direct diſtance is only two miles, if they could proceed in a ſtrait line. A ſtorm threatening every moment, we were obliged to haſten off the glacier as faſt as poſſible: for rain renders the ice exceedingly ſlippery; and in caſe of a fog, which generally accompanies a ſtorm in theſe upper regions, our ſituation would have been extremely dangerous. And indeed we had no time to loſe; for we had ſcarcely quitted the ice before the tempeſt began, and ſoon became very violent, attended with frequent flaſhes of lightning, and loud peals of thunder, which being re-echoed within the hollows of the mountains, added greatly to the awful ſublimity of the ſcene.

We now crawled for a conſiderable way upon our hands and feet along a ſteep and bare rock, and down one of the moſt difficult and rugged precipices I ever deſcended in Switzerland; the ſtorm at the ſame time roaring over us, and rendering the rock extremely ſlippery. After much difficulty, but without the leaſt accident, we gained the valley of Chamouny, and returned to the inn, as wet as if we had been plunged

plunged into water; but perfectly ſatisfied with our expedition.

POSTSCRIPT.

In my ſecond expedition to the valley of Chamouny, in 1785, inſtead of croſſing the glacier, I aſcended, in company with three Engliſhmen and a Swiſs gentleman, from Blair's Cabin, about an hour and a half, over the bare and rugged rocks, to a ſummit under the *Aiguille des Charmox*, near the ſpot from which a Genevan unfortunately fell and was daſhed to pieces. On this ſummit, at the very edge of the fearful precipice which overlooks the vale of Chamouny, ſtood a collection of ſtones, about three feet high, called by the natives *le bon homme*. We immediately raiſed this heap to the height of ſix feet, and piled up another of the ſame elevation, which we ſtyled, in the language of the country, *le monument de quatre Anglois*, in memory of the four * Engliſhmen who amuſed themſelves in forming it.

* Mr. Whitbread, the two Mr. Cliffords, and myſelf. We were accompanied and aſſiſted by M. Exchaquet, a Swiſs gentleman, remarkable for his numerous expeditions into theſe alps.

I employed

I employed an hour in aſcending part of the Montanvert on horſeback; the ſame time in walking up to Blair's Cabin; an hour and a half to the *monument de quatre Anglois*; half an hour in deſcending to Blair's Cabin, and three quarters of an hour in paſſing from thence to Chamouny.

I made this expedition in company with M. Exchaquet, a Swiſs gentleman, native of Aubonne, and director general of the mines of Savoy. His repeated expeditions into theſe regions have enabled him to execute a model in relief of the valley of Chamouny, Mont Blanc, the circumjacent alps, and glaciers. In order to render theſe models ſtill more valuable to the naturaliſt, he collects ſpecimens of the different ſpecies of ſtones which compoſe the mountains repreſented on the plan. M. Exchaquet is now employed by the government of Berne, in conſtructing a model of the diſtrict of Aigle.

M. Exchaquet has diſcovered a more commodious route, than that hitherto followed, to aſcend the Buet and Mount Breven, which are deſcribed by M. van Berchem, ſecretary to the Society of Sciences at Lauſanne, in his letter *

* Excurſion dans les Mines de Haut Faucigny, &c. Lauſanne, 1787.

to Mr. Wyttenbach of Berne, relating an expedition to the mines of Faucigny, and the glaciers which extend at the foot of Mont Blanc. In theſe letters the reader will find, beſide much accurate and pictureſque deſcription, an account of ſeveral foſſil and vegetable productions of the higher alps.

LETTER 38.

Excurſion towards the Summit of the Couvercle.

IN my ſubſequent expedition to the valley of Chamouny, I had propoſed puſhing my courſe ſtill further towards the glacier of Taleſre, but particularly to the Couvercle, of which I had read a very curious deſcription in Mr. de Sauſſure's work. But having hurt my foot in my aſcent to the Montanvert, I was prevented from executing my intended purpoſe. You will, however, have no reaſon to regret my diſappointment, on receiving the following account of that expedition, extracted from notes communicated by a friend.

We

We quitted the Priory at ſix in the morning, accompanied by Michael Paccard and Marie Coutet, two guides of Chamouny, traverſed the plain, and aſcended the Montanvert through a wood of pines. We had fine views of the glacier which gives riſe to the Arveron, and of the vale of Chamouny, chequered in a moſt ſingular manner with alternate rows of arable and paſture land. After continuing about an hour, we quitted our mules, proceeded on foot, and in about an hour and a half reached Blair's Hut, on the top of the Montanvert, where we reſted for a few minutes.

We then deſcended to the glacier, coaſted it by the path of the chryſtal hunters, and in about half an hour came to ſome difficult paſſes called *Les Ponts*, or the Bridges, which run over a perpendicular rock, at the edge of a frightful precipice. Theſe paſſages, though ſtill difficult, were extremely dangerous, until, by order of M. de Sauſſure, the rock was in ſome parts blown away with gunpowder, and ſmall holes formed for the hands and feet. The firſt bridge was about forty paces in length, and the two other paſſes ſomewhat leſs difficult, of about ten paces each. In about a quarter of an hour we arrived at a fountain which drops from the roof

and ſides of a natural grotto, the inſide whereof is overgrown with large tufts of the *Ranunculus glacialis*. Having walked about eight miles ſince our departure from Chamouny, we ſat down in this ſequeſtered grotto, and made our firſt repaſt.

From hence we croſſed ſome ſnow, the remains of a laſt winter's *Avalanche*, and immediately got upon the *Moraine*, the term given to the ſtones and earth which the glaciers diſgorge on each ſide, after having received them from the ſuperimpending mountains: they are very treacherous and difficult to walk upon. The ice upon which theſe ſtones reſt is harder than that of the reſt of the glacier; and the earth is laid in ſuch regular and equable heaps, as to give the appearance of art. As we looked from hence over the valley of ice, it ſeemed impracticable; ſo numerous and broad were the chaſms which interſected it in every direction, many bearing a tremendous appearance, and of an aſtoniſhing depth: but we ſoon found that it only required courage and activity. Inſtead of *crampons*, we had large nails in our ſhoes, which more effectually anſwered our purpoſe, and our ſpiked ſticks were on this occaſion particularly ſerviceable. Having deſcended upon the glacier, we found the ice ſoftened by a warm

warm wind, which rendered it leſs ſlippery than uſual. We continued along it about a quarter of an hour, then regained and walked along the Moraine near half an hour. We now embarked upon the great valley of ice called *Glacier des Bois*, I own not without emotion to ſee ourſelves upon this extraordinary deſert, broken into frightful chaſms, through the maze of which we were to paſs. It was curious to obſerve the numerous little rills produced by the collection of drops occaſioned by the thawing of the ice on the upper part of the glacier: theſe little rills hollow out ſmall channels, and torrent-like precipitate themſelves into the chaſms with a violent noiſe; increaſing the body of waters formed by the melting of the interior ſurface, and finding an outlet under the immenſe arch of ice in the valley of Chamouny, from which the Arveron ruſhes. This ice-water was agreeable to the palate, and extremely refreſhing from its coolneſs.

The field of ice, which at firſt ſight ſeemed impervious to all but the chamois and marmot, and ſcarcely practicable even for the daring foot-ſteps of man, is traverſed by flocks of ſheep, driven to the ſcanty paſturage which the oppoſite rocks afford. The ſhepherds leave them in theſe deſolate ſpots, and viſit them at different intervals. We traced their track over the ice, and

ſaw a flock returning. One ſhepherd preceded as a guide, and another followed the herd. We had the good fortune to preſerve one ſheep which had ſtrayed from the flock.

As we were continuing our courſe, we were ſurpriſed by a loud noiſe; and, looking round, perceived a large fragment of rock which had detached itſelf from one of the higheſt needles: it bounded from precipice to precipice with great rapidity, and, before it reached the bottom, was diſſolved almoſt entirely into duſt. Having proceeded about an hour, we were aſtoniſhed with a view far more magnificent than imagination can conceive: hitherto the glaciers had ſcarcely anſwered my expectations, but now they far ſurpaſſed them. Nature had clad herſelf in all her terrors. Before us was a valley of ice twenty miles in extent, bounded by a circular glacier of pure unbroken ſnow, called Tacu, which leads directly to the foot of Mont Blanc, and is ſurrounded by large conical rocks, terminating in ſharp points like the towers of an ancient fortification; to the right roſe a range of magnificent peaks, their intervals filled with glaciers; and far above the reſt, the majeſtic ſummit of Mont Blanc, his higheſt point obſcured with clouds. He appeared of ſuch immenſe magnitude, that at his preſence the circumjacent mountains, however gigantic,

gigantic, ſeemed to ſhrink before him, and "*hide their diminiſhed heads**." In half an hour we arrived at the Moraine, which forms a boundary of the valley, croſſed it, and proceeded upon a body of ice about three quarters of a mile broad. Here the ice was more even and free from chaſms than in the great valley. We then paſſed a ſecond Moraine, and beyond that another maſs of ice to a third Moraine: deſcending from thence, we came upon the laſt ridge of ice, broader conſiderably than the two former, and full of large chaſms: it is ſeparated from the rock only by a very narrow Moraine. Theſe Moraines contain great quantities of chryſtal.

Here we turned a little to the right, and aſcended the valley of ice, the ſcene every moment increaſing in magnificence and horror. In a ſhort time we arrived at the foot of the Couvercle, having walked about ſix miles on the ice. We now found it difficult to quit the ice; and the firſt part of the deſcent was really perilous. One ſtep was truly dreadful: a bulging rock entirely ſmooth, and preſenting a precipice of very conſiderable depth, which was terminated by an immenſe chaſm in the ice, ſeemed to forbid our progreſs; a ſmall hollow, however, in the middle ſerved for one foot, and from thence we

* Milton.

bounded over to the firm ground. One guide went firſt, and held out his hand on the oppoſite ſide, whilſt the other helped and directed us where to place our feet. We continued aſcending a path which now ſeemed without danger, though very narrow and ſteep, and carried along the ridge of precipices. The ſcenery around was indeed ſo ſublime as to baniſh all ideas of fatigue and apprehenſion. Half an hour more brought us to the ſide of a fountain, where we ſat down to our dinner. We had now employed five hours and a half from Chamouny, and notwithſtanding all difficulties and neceſſary halts, had walked fifteen miles, but none of us complained of fatigue.

The clouds beginning to gather, warned us to haſten to the top of the Couvercle. From that ſtation we had the view of three ſtupendous vallies of ice, the glacier of Talefre to the left, in front that of l'Echaut, and the Tacu to the right; all uniting in one great valley of ice called the *Glacier des Bois*, which ſtretched under our feet, and was ſurrounded and ornamented by the rugged needles.

The dead ſilence, which reigned in this place, was only interrupted by the bounding of diſtant chamois, and the cries of alarm which the marmots gave to their tribes at our approach.

Having

Having refreſhed ourſelves, we proceeded to the top of the Couvercle, a moſt extraordinary rock, having the appearance of a large irregular multilateral building placed on a mountain. The rock is granite, the aſcent was laborious, but perfectly ſecure. Towards its foot we found a bottle containing the names of two Engliſhmen who had reached that place about a fortnight before, and probably flattered themſelves that no ſtranger would go beyond them. We wrote our names on the reverſe of the paper, and carried the bottle with us to the ſummit of the Couvercle. Three quarters of an hour brought us to the point, and we reached a rock overhanging a precipice which my eyes dared not meaſure. In this ſituation we were ſurpriſed with a thunder ſtorm, which added great horror and magnificence to the ſcene. We took ſhelter under an impending rock, and liſtened to the roaring of the ſtorm with a mixed ſenſation of fear and pleaſure. On reflecting in this place that we were to meaſure back the ſame ground, and to undergo a repetition of the ſame difficulties, we were not exempted from alarm: but recollecting, that it is the duty of man to encounter ſome dangers, in order to behold ſuch glorious ſcenes, we from that moment baniſhed all apprehenſions.

Our

Our view from the top of the Couvercle comprehended the ſame ſublime ſcenes we had enjoyed from its baſe, but conſiderably heightened and enlarged; and the ſtupendous extent of ice appeared like a rugged expanſe of frozen ſea, bounded by the moſt gigantic rocks, and terminated by Mont Blanc, the Atlas of the globe.

Although we were thus entirely encloſed between ice and ſnow, and barren crags, where all vegetation might be ſuppoſed to ceaſe; yet our eyes repoſed on a triangular rock, clothed with graſs and alpine plants, and ſtarting up like a fertile iſland in the midſt of a deſolate ocean. It is known by the name of the *Garden*, and exhibits a curious contraſt to the ſurrounding drearineſs.

During our expeditions into the Alps, we had frequently found occaſion to remark the peculiarly deep ſhade of the blue colour in the "*pure Empyreal**; and to-day we were more particularly affected with this circumſtance. It conveyed a moſt ſublime idea of the infinity of ſpace: the higher we aſcended, the more beautiful it ſeemed; and we were informed by a perſon accuſtomed to alpine ſcenes, that on con-

* Milton.

ſiderable

ſiderable elevations he had frequently obſerved the ſtars at noon-day.

Our deſcent from theſe icy regions was no leſs fortunate than our aſcent; we reached the Priory at ſeven in the afternoon, without the leaſt accident, and wrapt in aſtoniſhment on the recollection of ſcenes, which ſurpaſs the imagination, as much as they defy deſcription.

I am, &c.

LETTER 39.

Various attempts to reach the ſummit of Mont Blanc—Succeſsful Expedition of James Balma and Dr. Paccard—Of Monſieur de Sauſſure—His phyſical Obſervations.

VARIOUS attempts having been made to reach the ſummit of Mont Blanc, as well by the guides of Chamouny, as by Meſſieurs de Sauſſure and Bourrit; a chronological account of the principal expeditions, which have at length terminated ſucceſsfully, will not, perhaps, be unintereſting.

The firſt enterprize was formed by Mr. Couteran and three guides of Chamouny, Michael Paccard, Victor Tiſſay, and Marie Coutet. On the thirteenth of July 1776, theſe adventurers ſet off from the Priory about eleven in the evening. They paſſed between the glaciers of Boſſon and Tacona; and after having employed above fourteen hours in mounting rugged and dangerous aſcents, in croſſing ſeveral vallies of ice, and large plains of ſnow, they found themſelves upon the top next to Mont Blanc. At firſt ſight, it appeared ſcarcely a league diſtant; but they ſoon diſcovered that the clearneſs of the air, the extraordinary whiteneſs of the ſnow, and its great height, made it ſeem nearer than it was in reality: and they perceived with regret, that it would require at leaſt four hours more to reach the ſummit, even ſuppoſing it practicable. But as the day was far advanced, and the vapours towards the ſummit of Mont Blanc began to gather into clouds, they were obliged to relinquiſh their enterprize. As they were returning in great haſte, one of the party ſlipped in attempting to leap over a chaſm of ice. He held in his hand a long pole, ſpiked with iron, which he had ſtruck into the ice; and upon this he hung dreadfully ſuſpended for a few moments, until he was releaſed by his companions.

panions. The danger he had juſt eſcaped, made ſuch an impreſſion upon him, that he fainted away, and continued for ſome time in that ſituation: he was at length brought to himſelf, and, though conſiderably bruiſed, ſufficiently recovered to be able to continue his journey. They arrived at Chamouny about eight that evening, after having employed two and twenty hours: as ſome ſort of recompence for ſo much fatigue, they enjoyed the ſatisfaction, at leaſt, of having approached nearer to Mont Blanc than any former adventurers.

According to Sir George Schuckborough, the ſummit to which they arrived is more than 13,000 feet above the Mediterranean. Theſe perſons, however, did not take the neceſſary precautions for ſo perilous an enterprize: for the expedition was not only extremely hazardous, but was alſo far too fatiguing and difficult to be accompliſhed within twenty-four hours. They ought to have ſet out in the morning, and to have found ſome proper place in which they might paſs the night; they would then have been ſufficiently refreſhed the next morning to purſue their expedition; and would not have found themſelves, after advancing within four hours of Mont Blanc, unable to proceed, and in danger of being overtaken by darkneſs in ſo dreary

dreary a ſituation. The failure of this expedition ſeemed for ſome time to repreſs all future attempts to attain the top of Mont Blanc, until the indefatigable Mr. Bourrit infuſed a new ſpirit into the inhabitants of Chamouny. After reiterated though unſucceſsful attempts, on the 11th of September 1784, Mr. Bourrit, accompanied by ſix guides, departed from Bionaſay; and was *ſcaling*, as he expreſſes himſelf, the *rampart* of Mont Blanc, when he ſuddenly found himſelf ſo extremely affected by the intenſe cold, that he was unable to proceed.

Marie Coutet and Francis Guidet, two of the guides who attended him in this expedition, had preceded their company, and aſcended to the Dome of Goutè, which is about 9,400 feet in a ſtrait horizontal direction from the ſummit. Marie Coutet informed me, that they paſſed the Middle Dome, and walked along the ridge between that dome and the ſummit as far as ſome high rocks, which appear from the vale of Chamouny like ſmall points riſing out of the ſnow; but night approaching, obliged them to return.

On the 4th of September 1785, Marie Coutet and James Lambat reached a place under a rock at a conſiderable elevation, where they paſſed the night. Setting off before ſun-riſe,

found

found themſelves about ſeven on the Dome of Goutè; and were proceeding towards the ſummit, with a fair proſpect of ſucceſs, when a violent ſtorm of hail enſued, accompanied with ſuch a ſtrong wind, as compelled them to return.

On the 13th of September, Meſſieurs de Sauſſure and Bourrit, attended by twelve guides well provided with barometers, thermometers, and other inſtruments, for the purpoſe of making the neceſſary obſervations, departed from Bionaſay, and arrived at a hut, which they had ordered to be conſtructed at *Pierre Ronde* 7,808 feet above the level of the ſea. Here they paſſed the night, and early the next morning reached the Dome of Goutè without the leaſt accident, and without much difficulty; where they were ſtopped by a freſh fall of ſnow, into which they ſunk ſo deep, that all farther progreſs was impracticable.

Mr. de Sauſſure informs us, that the mercury in the barometer ſunk eighteen inches and a half, and that he reached an elevation of 1,290 toiſes, or 8,256 Engliſh feet.

At length, in July 1786, ſix guides of Chamouny having failed in another attempt, James Balma, one of the company, being overtaken by darkneſs, as he was rambling upon the ice, miſſed

miſſed his way, and paſſed the night in a ſpot above the Dome of Goutè, elevated more than 12,000 feet above the level of the ſea. His youth, and the ſtrength of his conſtitution, having preſerved him from the effects of the nocturnal cold in ſo ſevere an atmoſphere, at the approach of morn he reconnoitred the ſituation, and obſerved a part which appeared to him more eaſy of acceſs than any of the others that had been hitherto attempted.

On his arrival at Chamouny he was ſeized with a very ſevere indiſpoſition, the effect of extreme fatigue, and of the intenſe cold. Being attended by doctor Paccard, a phyſician of the place, James Balma communicated his obſervations; and, in gratitude for his attendance, offered to conduct him to the ſummit of Mont Blanc.

On the 7th of Auguſt, theſe two daring adventurers ſallied from Chamouny upon this memorable expedition, and reached before dark the mountain of *La Cote*, which overhangs the upper part of the glacier of Boſſon. Here they paſſed the night; and at three in the morning purſued their route over the ice, aſcended the Dome of Goutè, paſſed under the Middle Dome, and at the laſt pyramid of rock turned to the eaſt, and continued along the ridge, which is

ſeen

ſeen from Geneva, and lies on the left of the ſummit. Here they firſt began to experience ſuch intenſe cold, and ſuch extreme fatigue, that Dr. Paccard was almoſt induced to relinquiſh the enterprize: being, however, encouraged by James Balma, more accuſtomed to ſuch fatiguing and dangerous expeditions, he followed his companion. The wind was ſo violent and piercing, that in order to avoid its blowing in their faces, they were obliged to walk ſideways for a conſiderable time. About ſix in the afternoon, they at length attained the ſummit of Mont Blanc; and ſtood triumphantly on a ſpot of ground, which no one had reached before, and at the elevation of 15,662 feet above the ſea, which is undoubtedly the higheſt point in the antient globe. They remained on the ſummit no more than half an hour, the cold being ſo intenſe, that the proviſion was frozen in their pockets, the ink congeled in their inkhorns; and the mercury in Fahrenheit's thermometer ſunk to 18½ degrees. Doctor Paccard had juſt time to obſerve the ſtate of the barometer, which he has not communicated to the public.

They had employed fifteen hours in aſcending; and though they again reached the mountain of La Cote in five hours, yet they found great dif-

ficulty in deſcending, their ſight being debilitated by the reflection from the ſnow. They arrived at La Cote about midnight, after twenty hours unremitted fatigue. Having repoſed themſelves two hours, they again ſallied forth, and returned to Chamouny at eight in the morning. Their faces were excoriated, and their lips exceedingly ſwelled; Dr. Paccard was almoſt blind, and his eyes continued to be affected for a conſiderable time.

We cannot expect any accurate experiments from theſe two perſons, to whom the glory of having firſt aſcended the ſummit of Mont Blanc is undoubtedly due. But they prepared the way for the obſervations and diſcoveries of future naturaliſts, and particularly of M. de Sauſſure, whoſe indefatigable zeal did not permit him to reſt, until he had reached the top of Mont Blanc, and made thoſe experiments which cannot fail greatly to elucidate the theory of the atmoſphere.

That able naturaliſt ſet out on this ſucceſsful expedition, from the valley of Chamouny, on the 13th of Auguſt 1787. He was accompanied by eighteen guides, who carried a tent, matraſſes, all neceſſary accommodations, and inſtruments of experimental philoſophy. They paſſed the firſt night

night on the top of the mountain of La Cote, in a hut previouſly conſtructed for that purpoſe. At four o'clock in the following afternoon they reached an elevation of 9,312 feet above the Priory, or 12,762 above the level of the ſea. Here they encamped, and formed an excavation in the congeled ſnow, which they covered with a tent. In this icy habitation, inſtead of ſuffering from the cold, M. de Sauſſure felt ſuch a ſuffocating heat, from the cloſeneſs of the tent, and the number of perſons crouded in ſo ſmall a compaſs, that he was frequently obliged to go into the open air in order to breathe.

The next morning the whole company departed at ſeven; and found the aſcent in ſome places ſo ſteep, that the guides who preceded were obliged to hew out ſteps with a hatchet. At eleven they reached the ſummit of Mont Blanc. Here they continued three hours and a half, during which time M. de Sauſſure enjoyed, with rapture and aſtoniſhment, a view the moſt extenſive as well as the moſt rugged and ſublime in nature; and made thoſe obſervations which will render this expedition no longer a matter of mere curioſity. Until a complete and ample detail of thoſe obſervations ſhall be communicated to the public, you will perhaps not be diſpleaſed with the following particulars ſelected from a

temporary publication of M. de Sauſſure himſelf *.

He did not find the cold ſo extremely piercing as was experienced by Dr. Paccard and James Balmat. By comparing his experiments on Mont Blanc with thoſe made at the ſame time by M. Senebier at Geneva, he was enabled to make the following obſervations. Reaumur's thermometer ſtood in the ſhade at $2\frac{3}{10}$ below freezing point, or 27. of Fahrenheit; at Geneva at 22. 6, or 82 of Fahrenheit, which gives a difference of near 25 degrees of Reaumur, or 45 of Fahrenheit, between the ſtate of the atmoſphere at both places.

De Luc's barometer fell to $16.0\frac{144}{160}$, and as it ſtood at Geneva at $27.2\frac{1085}{1600}$, it gives a difference of 11, 2, without regarding the fraction. On eſtimating the height of Mont Blanc from barometrical experiments, he found it almoſt exactly correſpond with that given by Sir George Schuckborough, or 15,662 Engliſh feet above the level of the ſea, and which reflects the higheſt honour on the accuracy of the Engliſh obſerver.

* A tranſlation of this account, by the Rev. Mr. Martyn, profeſſor of botany in the univerſity of Cambridge, printed by Kearſley, forms an Appendix to his Sketch of a Tour through Switzerland, which I would recommend to the traveller.

By

By experiments with the hygrometer, the air on the top of Mont Blanc contained ſix times leſs humidity than that of Geneva; and to this extreme dryneſs of the atmoſphere, he imputes the burning thirſt which he and his companions experienced. It requires half an hour to boil water on the top of Mont Blanc, fifteen or ſixteen minutes are ſufficient at Geneva, and fourteen or fifteen by the ſea ſide. By experiments on the electrometer, the balls diverged only three lines; the electricity was poſitive. On the ſummit he noticed two butterflies on the wing; obſerved, at the elevation of 11,392 feet above the ſea, the *Silene Acaulis*, or moſs campion, in flower; and ſtill higher up, on the moſt elevated rocks, the *Lichen Sulphureus* and *Lichen Rupeſtris* of Hoffman.

He adds, that the ſummits of Mont Blanc and the adjacent mountains are compoſed of granite; and that, next to Mont Blanc, the Schreckhorn and Mount Roſa in Piedmont, appeared the moſt elevated points.

M. de Sauſſure, as well as many of his party, found themſelves extremely affected by the rarefaction of the air; and at two began returning. They deſcended a little lower than the place in which they paſſed the preceding night, arrived the next morning at the valley of Chamouny without the leaſt accident, and, as they had taken

the precaution to cover their faces with crape, their skins were not excoriated, nor their sight debilitated.

On the eighth of August, a few days after M. de Saussure's expedition, Mr. Beaufoy, an English gentleman, succeeded in a similar attempt, though it was attended with greater difficulty, arising from the enlargement of the chasms in the ice. An account of this expedition was read before the Royal Society on the 13th of December 1787, and will probably be communicated to the public.

LETTER 40.

Conjectures on the Formation and State of the Glaciers.

NO subject in natural history is more curious than the origin of these glaciers, extending into fields of corn and pasture, and lying, without being melted, in a situation, where the sun is sufficient to bring the earth to maturity: for it is almost literally true, that with one hand I could touch ice, and the other ripe corn. As in my first expedition to the alps my stay was exceedingly short, I declined entering upon a subject too important to be superficially treated, and only threw together a few hasty remarks, which occurred

occurred to me on the ſpot. But I find that theſe remarks, however haſty and ſuperficial, ſerved to excite your curioſity; and have induced you to inquire, " *Which is the moſt rational ſyſtem concerning the formation of the glaciers? Are they in a ſtate of augmentation or diminution; or do they remain within the ſame limits?*"

Although in my ſubſequent journeys to the alps I made this ſubject a particular object of reſearch; and although I have attentively peruſed the principal ſyſtems, which have been formed concerning the formation of glaciers; yet it is not without great diffidence, that I can preſume to reply to your very arduous queſtions.

The theory of Gruner, confirmed and amended by that able naturaliſt M. de Sauſſure, appears to me the moſt ſimple and rational; and I do not know how I can better ſatisfy your curioſity, than by forming an extract from his much eſteemed work *, interſperſing it with a few additional remarks drawn from my own particular obſervations.

If a perſon could be conveyed to ſuch an elevation as to embrace at one view the alps of Switzerland, Savoy, and Dauphiné, he would behold a vaſt chain of mountains, interſected by numerous vallies, and compoſed of many parallel chains, the higheſt occupying the center, and

* Voyages des Alps, v. i. c. 7.

the others gradually diminiſhing in proportion to their diſtance from that center.

The moſt elevated, or central chain, would appear briſtled with pointed rocks, and covered, even in ſummer, with ice and ſnow, in all parts that are not abſolutely perpendicular. On each ſide of this chain he would diſcover deep vallies clothed with verdure, peopled with numerous villages, and watered by many rivers. In conſidering theſe objects with greater attention, he would remark, that the central chain is compoſed of elevated peaks and diverging ridges, whoſe ſummits are overſpread with ſnow; that the declivities of the peaks and ridges, excepting thoſe parts that are extremely ſteep, are covered with ſnow and ice; and that the intermediate depths and ſpaces between them are filled with immenſe fields of ice, terminating in thoſe cultivated vallies which border the great chain.

The branches moſt contiguous to the central chain would preſent the ſame phenomena, only in a leſſer degree. At greater diſtances no ice would be obſerved, and ſcarcely any ſnow, but upon ſome of the moſt elevated ſummits; and the mountains diminiſhing in height and ruggedneſs, would appear covered with herbage, and gradually ſink into hills and plains.

In this general ſurvey, the glaciers may be divided into two ſorts; the firſt occupying the

deep

deep vallies ſituated in the boſom of the alps, and termed by the natives *Vallées de Glace*, but which I ſhall diſtinguiſh by the name of *Lower Glaciers*; the ſecond, which clothe the ſummits and ſides of the mountains, I ſhall call *Upper Glaciers*.

1. The Lower Glaciers are by far the moſt conſiderable in extent and depth. Some ſtretch ſeveral leagues in length; that of des Bois in particular is more than fifteen miles long, and above three in its greateſt breadth.

The Lower Glaciers do not, as is generally imagined, communicate with each other; and but few of them are parallel to the central chain: they moſtly ſtretch in a tranſverſe direction, are bordered at the higher extremity by inacceſſible rocks, and on the other extend into the cultivated vallies.

The thickneſs of the ice varies in different parts. M. de Sauſſure found its general depth in the glacier des Bois from eighty to a hundred feet; but queſtions not the information of thoſe who aſſert, that in ſome places its thickneſs exceeds even ſix hundred feet.

Theſe immenſe fields of ice uſually reſt on an inclined plain: being puſhed forwards by the preſſure of their own weight, and but weakly ſupported by the rugged rocks beneath, are interſected

ſected by large tranſverſe chaſms; and preſent the appearance of walls, pyramids, and other fantaſtic ſhapes, obſerved at all heights and in all ſituations, wherever the declivity exceeds thirty or forty degrees.

But in thoſe parts, where the plain on which they reſt is horizontal, or only gently inclined, the ſurface of the ice is nearly uniform; the chaſms are but few and narrow, and the traveller croſſes on foot, without much difficulty.

The ſurface of the ice is not ſo ſlippery as that of frozen ponds or rivers: it is rough and granulated, and is only dangerous to the paſſenger in ſteep deſcents. It is not tranſparent, is extremely porous and full of ſmall bubbles, which ſeldom exceed the ſize of a pea, and conſequently is not ſo compact as common ice: its perfect reſemblance to the congelation of ſnow impregnated with water, in its opacity, roughneſs, and in the number and ſmallneſs of the air-bubbles, led M. de Sauſſure to conceive the following ſimple and natural theory on the formation of the glaciers.

An immenſe quantity of ſnow is continually accumulating in the elevated vallies which are encloſed within the alps, as well from that which falls from the clouds during nine months in the year, as from the maſſes which are inceſſantly

ſantly rolling from the ſteep ſides of the circumjacent mountains. Part of this ſnow, which is not diſſolved during ſummer, impregnated with rain and ſnow-water, is frozen during winter, and forms that opaque and porous ice of which the Lower Glaciers are compoſed.

2. The Upper Glaciers may be ſubdivided into thoſe which cover the ſummits, and thoſe which extend along the ſides of the alps.

Thoſe which cover the ſummits of the alps, owe their origin to the ſnow that falls at all ſeaſons of the year, and which remains nearly in its original ſtate, being congeled into a hard ſubſtance, and not converted into ice. For although, according to the opinion of ſome philoſophers, the ſummit of Mont Blanc, and of other elevated mountains, is, from the gliſtening of the ſurface, ſuppoſed to be covered with pure ice; yet it appears, both from theory and experience, that it is not ice but ſnow. For, in ſo elevated and cold a region, there cannot be melted a quantity of ſnow ſufficient to impregnate with water the whole maſs, which remains undiſſolved. Experience alſo juſtifies this reaſoning. M. de Sauſſure found the top of Mont Blanc only encruſted with ice, which, though of a firm conſiſtence, was yet penetrable with a ſtick; and on the declivities of the ſummit he diſcovered,

diſcovered, beneath the ſurface, a ſoft ſnow without coherence.

The ſubſtance which clothes the ſides of the alps is neither pure ſnow like that of the ſummits, nor ice which forms the Lower Glaciers, but is an aſſemblage of both. It contains leſs ſnow than the ſummits, becauſe the ſummer heat has more power to diſſolve it, and becauſe the liquefied ſnow deſcending from above, the maſs is penetrated with a larger quantity of water. It contains more ſnow than the Lower Glaciers, becauſe the diſſolution of the ſnow is comparatively leſſer. Hence the ice is even more porous, opaque, and leſs compact than the ice of the Lower Glaciers; and is of ſo doubtful a texture as renders it, in many parts, difficult to decide, whether it may be called ice or frozen ſnow.

In a word, there is a regular gradation from the ſnow on the ſummits to the ice of the Lower Glaciers, formed by the intermediate mixture of ſnow and ice, which becomes more compact and leſs porous in proportion as it approaches the Lower Glaciers, until it unites and aſſimilates with them. And it is evident, that the greater or leſſer degree of denſity is derived from the greater or leſſer quantity of water, with which the maſs is impregnated.

In regard to your ſecond queſtion, " *Whether the glaciers are in a ſtate of increaſe or diminution,*" though I declined on a former occaſion to enter minutely upon a ſubject, which required much accurate obſervation and repeated experimental inveſtigation; yet I ventured to make one remark, which ſeemed to prove the occaſional increaſe and diminution of the glaciers; contrary to the opinion of ſome philoſophers, who maintain, that they continue always the ſame, and of others, who aſſert, that they are continually increaſing.

The borders of the glacier of Montanvert, are moſtly ſkirted with trees: towards its baſe a vaſt arch of ice riſes to near a hundred feet in height; under which the Arveron ruſhes with conſiderable force, and in a large body of water. As we approached the ice, we paſſed through a wood of firs: thoſe trees which ſtand at a little diſtance from the arch are about eighty feet high, and are undoubtedly of a very great age. Between theſe and the glacier, the trees are of a later growth; as is evident from their texture and inferior ſize. Others, ſtill ſmaller, have been overturned and enveloped in the ice: there ſeems to be a kind of regular gradation in the age of theſe ſeveral trees, from the largeſt which are ſtanding to the ſmalleſt that lie proſtrate.

Theſe

Theſe facts juſtly lead to the following concluſions:—that the glacier once extended as far as the row of tall firs; that, upon its gradual diſſolution, a number of trees ſhot up in the very ſpots which it formerly occupied; that, ſince that period, the ice has again advanced; and has overturned the trees of later date, before they had grown to any conſiderable height.

To theſe circumſtances, the following fact may be added. Large ſtones of granite are uſually found at a ſmall diſtance from the extremities of the glacier. Theſe ſtones have certainly fallen from the mountains upon the ice, have been carried on in its progreſs, and have tumbled into the plain upon the diſſolution or ſinking of the ice which ſupported them. Theſe ſtones, which the inhabitants call *Moraine*, form a kind of border towards the foot of the valley of ice, and have been puſhed forward by the glacier in its advances: they extend even to the place occupied by the larger pines.

As ſeveral writers upon Switzerland have, in contradiction to theſe facts, endeavoured to prove, that the ſnow and ice are continually accumulating in the alps, I ſhall here throw together a few additional remarks, that may tend to confirm the contrary opinion.

The Inferior Glacier of Grindelwald was ſo conſiderably diminiſhed ſince my firſt expedition in 1776, that the ſpot which its extremity then occupied was, in 1785, removed at leaſt four hundred paces from its former ſite. In the valley of Chamouny, the *Murailles de Glace*, which I deſcribed as forming the border of the glacier of Boſſon, no longer exiſted; and young trees had ſhot up in the parts which were then covered by the glacier of Montanvert.

The advocates, however, for the increaſe of the glaciers, admitting theſe facts, yet deny that any judgment can be formed concerning the ſtate of the more elevated regions, from what paſſes in the vallies, where the ſun has power to bring the fruits of the earth to maturity. They aſſert that it appears, both from theory and fact, that more ſnow falls, and more ice is annually formed in the alps than can be annually diſſolved.

To judge from theory; they argue, that the cold occaſioned by the maſs of ice already formed ought to augment it ſtill further; and in regard to experience, it is evident, that within the memory of the preſent generation, many mountains have been covered, many paſtures and habitations invaded, and many paſſages irrecoverably obſtructed by the ice.

In

In conſidering the arguments drawn from theory, we may obſerve, that the cauſes which tend to the diminution of the ice, are no leſs powerful than the augmentation of the cold, which is ſuppoſed to occaſion its indefinite increaſe. Theſe cauſes are principally; 1. rain and ſleet in the leſs elevated regions; 2. evaporation; 3. deſcent of the ſnow and ice, both precipitous and gradual; 4. heat of the atmoſphere; 5. mean temperature of the earth.

1. The rain and ſleet, which falls during ſummer upon the Lower Glaciers, not only thaws the ice, but increaſes thoſe rills that collect on the ſurface, excavate channels, deſcend into the clefts, and aſſiſt in forming them.

2. Evaporation is a ſtill more powerful cauſe; as it acts at all heights, and in all ſeaſons.

3. The deſcent of the ſnow and ice, as diſtinguiſhed by precipitous and gradual. The precipitous, or continual fallings of congeled ſnow, termed by the natives *avalanches*, are detached either by their own weight, ſoftened from their hold by the heat of the ſun or the warm air which blows from the ſouth, or overthrown by the violent hurricanes that are extremely common in the upper alps. When theſe maſſes are precipitated into a milder air, though they may ſometimes indeed reſiſt the influence of heat, and form

form valleys of ice, yet they are more uſually diſſolved. Theſe *avalanches* are moſt common in the Upper Glaciers; whereas the gradual deſcent of the ice is chiefly confined to the Lower Glaciers, and is a very powerful agent in leſſening the aggregate maſs.

All the Lower Glaciers, or vallies of ice, reſt on an inclined plain, are arched or hollow, and are undermined and weakened by the torrents, which are conſtantly flowing, as well from the Upper Glaciers, as from their own interior ſurface.

The natural tendency of a heavy body in ſuch a poſition is to deſcend; and its progreſſive motion is accelerated in proportion to its own weight, and the greater inclination of its baſis. This progreſſive motion, which acts, though imperceptibly, yet gradually and uniformly, carries the ice into thoſe cultivated plains and vallies, where the ſun ripens the fruits of the field; and where a period is neceſſarily put to its farther increaſe.

If you require a proof of this imperceptible deſcent, the anſwer is obvious. It is to be collected from the facts which I have already enumerated; namely, from the trees which are occaſionally overturned by the ice in its progreſs, and by the moraine of ſtones which is obſerved at the bottom of the Lower Glaciers. Theſe

ſtones being ſimilar to the mountains of the upper alps, and eſſentially different from the rocks below, muſt have been conveyed by the ice in its deſcent from the Upper Glaciers.

4. The heat of the atmoſphere, or the efficacy of the ſun's rays on the outward ſurface of the glaciers, is too evident to require any proof, even to thoſe who have never been in the alps.

Another cauſe of a thaw, derived from the heat of the atmoſphere, which will not be expected by thoſe who have not viſited theſe icy regions, is the warm winds which blow by night as well as by day in the Upper no leſs than in the Lower Glaciers. Theſe warm winds are, during ſummer, ſo common in theſe parts, that I never croſſed a glacier without feeling, in ſome particular poſitions, a warmth ſimilar to the air of a hot-bath.

5. But as theſe two cauſes only operate in ſummer; and as the ſun's rays do not produce ſufficient effect in the higheſt parts, we muſt have recourſe to the mean temperature of the earth, which ſeems to be the greateſt and moſt powerful agent in preventing an indefinite augmentation of ice and ſnow. This mean temperature, termed by ſome philoſophers the internal* heat of

* Some philoſophers impute this conſtant thaw, which takes place in the lower ſurface of the glaciers, to an internal ſource

of the earth, is always above the freezing point, as is evident from the heat of the ſprings which iſſue from the bowels of the earth. In winter, therefore, or in thoſe high regions of the globe where the cold is uſually below the freezing point, when any ſpot of ground is covered with only a thin coat of ſnow, it may be ſo far cooled, to a certain depth, by the influence of the external air, as not to be capable of diſſolving any part of the ſuperincumbent ſnow. But when the maſs of ſnow is of ſuch a thickneſs as to protect the ſurface of the ground from the effects of the atmoſpherical cold, the mean temperature, which is always above the freezing point; will be ſufficient to melt the contiguous ſurface of ſnow, and to occaſion a conſtant thaw, which ſupplies thoſe currents of water, that flow, at all ſeaſons, from the Upper and Lower Glaciers.

In regard to the argument derived from experience, it is ſufficient to obſerve, that while I admit the facts which prove the progreſs of the ice, it by no means ſeems to follow that its ſum is perpetually increaſing. For the advocates

ſource of heat in the earth; but that opinion has been very ably refuted by ſeveral modern naturaliſts; the mean temperature of the ground being found ſufficient to account for *all* the phenomena, local circumſtances excepted, which have been uſually aſſigned to an internal heat of the earth.

who ſupport this opinion, while they ſcrupulouſly enumerate the places which have been invaded by the ice, do not take any notice of thoſe parts, no leſs numerous, from which the ice has retired.

During my ſecond expedition into the Alps, I alſo made this point of controverſy a particular object of my reſearches; and on inquiring from the *chaſſeurs*, and other perſons who frequent the mountains, the greateſt part were of opinion that the collection of ice and ſnow, even in the elevated regions, was by no means in a continual ſtate of augmentation; but that while it gained in ſome places it diminiſhed in others; and that upon an average, the aggregate maſs was nearly the ſame.

LETTER 41.

Account of the Bouquetin, or Mountain-Goat.

I Obſerved at Michael Paccard's, a guide of Chamouny, a head and horns of the male *bouquetin*, or mountain-goat, and ſtuffed ſpecimens of a female and a young one.

As this animal is extremely rare, and inhabits the higheſt and almoſt inacceſſible mountains, the deſcriptions of it have been very inaccurate and confuſed. But a new light has been lately thrown on the ſubject by Dr. Girtanner of St. Gallen, and by M. van Berchem, ſecretary to the Society of Sciences at Lauſanne; and although theſe two naturaliſts differ in ſome inſtances, yet their joint labours have aſſiſted in aſcertaining the nature and œconomy of this curious animal. The following account, therefore, of the bouquetin, is drawn principally from their obſervations in Rozier's Journal, and from additional information obligingly communicated to me by M. van Berchem himſelf *.

The

* The engraving which accompanies this letter, contains a full-grown male bouquetin, figured from one in Ridinger's

The elder naturaliſts ſpeak of the bouquetin as of an animal well known, and in their time by no means uncommon on the high alps of Switzerland, eſpecially in the canton of Glarus and in the country of the Griſons. On the town-hall at Glarus, there is ſtill a pair of horns of an extraordinary length, belonging to an animal of this ſpecies, formerly killed in the canton. Theſe horns are probably the ſame which Ray ſaw in the laſt century, when the natives informed him, that the breed was extinct in that canton.

That this animal was found among the Griſons, appears from a letter in the poſſeſſion of M. de Salis Seervis, dated the 14th of October, 1574, in which the Archduke Ferdinand of Auſtria requires from his bailif of Caſtels, in the Pretigau, two bouquetins alive; adding, that he had received ſeveral from his predeceſſors. About

ger's "*Abbildung der Yagtbaren Thiere,*" and the head and horns of a male bouquetin aged two years, communicated by M. van Berchem. I had the former engraved, becauſe Ridinger's plates are extremely rare, and the figure is the beſt repreſentation of the bouquetin of the Alps which has fallen under my obſervation; and the latter, becauſe it refutes the opinion uſually maintained, that the age of this animal may be aſcertained from the number of tranſverſe ridges in the horns.

forty

forty years after the date of this letter the animal began to be rare; for a decree in the year 1612 prohibits the chace of the bouquetin under a fine of fifty crowns, and that of the chamois from New-year's day to St. John, under the penalty of ten crowns. Sprecher, in his *Pallas Rhetica*, publiſhed in 1617, relates that the chace of the bouquetin was not uncommon in his time, in the vallies of Pregallia, Vals, and Upper Engadina. Another law of 1633, confirmed in the following year, inflicts corporal puniſhment on thoſe who kill a bouquetin. But theſe ſeverities could not preſerve the breed; and it is probable that this was the epoch of their deſtruction, when the fear of their being extinct prompted government to forbid the chace *. And it is certain, that within the memory of the preſent generation, no bouquetins have been found in a wild ſtate in the country of the Griſons.

* Franciſcus Niger, in his deſcription of the Griſons, as quoted by Conrad Geſner, ſays, that they ſpare this animal in hunting, becauſe it is the armorial bearing of the country.

" *Parcitur hic Capricorne tamen tibi, Panos amice,*
" *Arma quod exornes, et pulchra inſignia gentis,*
" *Hinc longam hinc vitam vivens, ingentia jactas*
" *Cornua, perque plicas rugoſa, repandaque in armos,*
" *Formoſuſque nigris villis in montibus erras.*"

This animal is now chiefly found upon that chain which ſtretches from Dauphiné through Savoy to the confines of Italy, and principally on the alps bordering on Mont Blanc, which is the moſt elevated part of that chain. Its particular haunts are the valley of Cormayor to the ſouth of Mont Blanc, thoſe heights which lie between Mont Blanc and the frontiers of the Vallais, and the mountains which border the Val Savarenche; but it is met with more abundantly in the mountains of the valley of Cogne, which is the frontier of the valley of Dent in Piedmont; and almoſt always frequents thoſe parts that have a ſouthern aſpect.

The ſeveral names by which the bouquetin is known in different languages, are, in Greek, by Homer and Ælian, Αιξ αγριος *; Latin, *Ibex*, which name has been adopted by moſt modern naturaliſts; Italian, *Capra Selvatica*; German and Swiſs, *Steinboch*, or Rock-goat, the female, *Etagne*, or *Ybſchen* and *Ybſchgeiſs*, perhaps from the Latin Ibex; Flemiſh, *Wildgheit*; French, *Bouquetin*, antiently *Bouc-eſtain*, the German name reverſed. Belon named it *Hircus ferus*; Briſſon,

* Moſt naturaliſts affirm that Homer calls this animal Αιξ ιξαλος, whereas he ſtiles it Αιξ αγριος, or the wild-goat, adding the epithet ιξαλος, or wanton. Iliad Δ, v. 105.

Hircus

Hircus Ibex; Linnæus, *Capra Ibex*; Pennant, the *Ibex*; and Dr. Girtanner, *Capra Alpina*. I have adopted the name of Bouquetin, becauſe it is the provincial appellation of the animal in the Alps.

The ſyſtematic naturaliſts agree in taking the ſpecific character of the bouquetin from the beard, and the horns, which they deſcribe as knobbed along the upper or anterior ſurface, and reclining towards the back.

The male bouquetin is larger than the tame goat, but reſembles it much in the outer form. The head is ſmall in proportion to the body, with the muzzle thick, compreſſed, and a little arched. The eyes are large, round, and have much fire and brilliancy. The horns large, when of a full ſize weighing ſometimes 16 or 18 pounds, flatted before, and rounded behind, with one or two longitudinal ridges, and many tranſverſe ridges; which degenerate towards the tip into knobs; the colour duſky brown. The beard long, tawny, or duſky. The legs ſlender, with the hoofs ſhort, hollow on the inſide, and on the outſide terminated by a ſalient border, like thoſe of the chamois. The body ſhort, thick, and ſtrong. The tail ſhort, naked underneath, the reſt covered with long hairs, white at the baſe and

and ſides, black above and at the end. Space under the tail in ſome tawny, in others white. The coat long, but not pendent, aſh-coloured, mixed with ſome hoary hairs: a black liſt runs along the back; and there is a black ſpot above and below the knees. Its colour, however, like that of other animals, muſt neceſſarily vary according to its age and local circumſtances.

The female has been little noticed among naturaliſts. She is one third leſs than the male, and not ſo corpulent: her colour is leſs tawny: her horns are very ſmall, and not above eight inches long. In theſe, and in her figure, ſhe reſembles a goat that has been caſtrated whilſt young. She has two teats, like the tame ſhe-goat, and never has any beard, unleſs, perhaps, in an advanced age. The young ones are of a dirty grey colour, and the liſt along the back is ſcarcely diſcernible.

There is a ſtuffed ſpecimen of the male bouquetin of the alps in Mr. Parkinſon's, late Sir Aſhton Lever's, Muſeum, of which I have here given ſome of the principal dimenſions, as they are not to be found in any author that has fallen under my obſervation, except in Buffon's Hiſtoire Naturelle; and thoſe were taken by Mr. Daubenton from a young ſubject.

LIBRARY OF THE ROYAL BRANCH OF THE ARTS

Full grown Male Bouquetin

Head of a Male Bouquetin two Years Old

Published as the Act directs Jan.y 26 1789, by T. Cadell Strand.

	Feet.	Inches.
Length of the head from the lower jaw to the ſpace between the horns —	0	$9\frac{1}{2}$
Length from the root of the horns to the baſe or origin of the tail —	4	4
Height at the ſhoulder before —	2	$5\frac{1}{2}$
Height at the ſhoulder behind —	2	$7\frac{1}{2}$
Circumference of the body next to the fore legs — — —	3	6
Circumference next the hind legs —	3	2
Circumference in the middle —	3	8
Circumference of the neck, cloſe to the ſhoulders — — —	2	$3\frac{1}{2}$
——————— between the ears and the horns — —	1	4

The horns being ſo remarkable a part of this animal, I ſhall here add the meaſurement, not only of thoſe belonging to Mr. Parkinſon, but of ſeveral pairs which are depoſited in the Britiſh Muſeum. Thoſe in the ſecond and third columns certainly belong to the bouquetin of the alps. Their colour is a duſky brown. The firſt of theſe is very flat before; the ſecond is not ſo flat; neither the longitudinal nor tranſverſe ridges are ſo very ſtrongly marked: theſe are evidently the horns of a very old animal. The horns in the fourth column belong alſo to the bouquetin; but probably from ſome other country.

try. Their colour is black; they are much flatter on the ſides, and narrower before than the others; the longitudinal ridge is very ſtrongly marked, and the tranſverſe ridges ſtronger and more numerous. I cannot obſerve more than one * longitudinal ridge in any of the horns which I have examined, the exterior part of the front being univerſally rounded off, and the tranſverſe ridges run very little into the ſides. The horns in the fifth column belong unqueſtionably to the Ægagrus of Pallas, which is not improbably a variety of the bouquetin. Two fine pairs of theſe horns were given to the Muſeum by the late duke of Northumberland. They have no anterior flat face, but a ſharp ridge, with a few knobs in front, about nine in number, and very diſtant from each other; they are ſtreaked tranſverſely, more evidently towards the end. Their extremities are much arched, with the points turning inwards. The colour is the ſame with thoſe of the alpine bouquetins.

* Moſt naturaliſts affirm, that the horns are marked with *two* longitudinal ridges; all thoſe that have fallen under my obſervation have only *one* interior longitudinal ridge, and a faint mark on the exterior edge, which is probably taken for the *ſecond* longitudinal ridge.

DIMENSIONS

DIMENSIONS of the horns in Mr. Parkinſon's, late Sir Aſhton Lever's, Muſeum (n. 1.) and in the Britiſh Muſeum.

	N° 1.	N° 2	N° 3.	N° 4	N° 5.
	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
Rectilinear direction, or chord, from the root to the tip —	2 1½	1 9	2 0	1 8	1 6 1 4
Arc, or length meaſured along the curvature — —	2 8	2 6½	3 6	3 0	3 9 4 2
Circumference at the baſe —	0 9½	0 8	0 10½	0 9	0 9
Diſtance between them at the baſe — — — —	0 0½	0 1	—	—	0 0½
Diſtance between them at the tips — — — —	1 9¾	2 2			
Number of tranſverſe ridges —	24	12	20	24	

It is a common notion of the hunters, adopted by many naturaliſts, that the age of a bouquetin may be eſtimated by the number of tranſverſe ridges or knobs in the horns. M. van Berchem, however, aſſures me, from his own obſervations, that this is a vulgar error; and that its age can only be aſcertained by the number and form of the teeth, as in ſheep and goats. This miſtake has alſo occaſioned its term of life to be ſuppoſed much longer than it really is. This animal increaſes in bulk to the age of four years; according, therefore, to the ſyſtem of the Count de Buffon, that the age is about ſeven times the growth, its life is twenty-eight or thirty years.

In

In a ſtate of tranquillity, the bouquetin commonly carries the head low; but in running holds it high, and even bends it a little forward. He mounts a perpendicular rock of fifteen feet at three leaps, or rather three ſucceſſive bounds of five feet each. It does not ſeem as if he found any footing on the rock, appearing to touch it merely to be repelled, like an elaſtic ſubſtance ſtriking againſt a hard body. He is not ſuppoſed to take more than three ſucceſſive leaps in this manner. If he is between two rocks which are near each other, and wants to reach the top, he leaps from the ſide of one rock to the other alternately, till he has attained the ſummit. He alſo traverſes the glaciers with rapidity; but only when purſued, for otherwiſe he avoids them.

The bouquetins feed, during the night, in the higheſt woods: but the ſun no ſooner begins to gild the ſummits, than they quit the woody region, and mount, feeding in their progreſs, till they have reached the moſt conſiderable heights. They betake themſelves to the ſides of the mountains which face the eaſt or ſouth, and lie down in the higheſt places and hotteſt expoſures: but when the ſun has finiſhed more than three quarters of its courſe, they again begin to feed, and to deſcend towards the woods; whither they retire

retire when it is likely to ſnow, and where they always paſs the winter. The bouquetins aſſemble in flocks, conſiſting at the moſt of ten, twelve, or fifteen; but more uſually in ſmaller numbers. The males which are ſix years old and upwards, haunt more elevated places than the females and younger bouquetins; and as they advance in age are leſs fond of ſociety; they become gradually hardened againſt the effects of extreme cold, and frequently live entirely alone.

In ſummer they feed principally on the *genipi* and other aromatic plants which grow in the high alps; and in winter they eat the lichens, and brouſe on buſhes and the tender ſhoots of trees. They prefer thoſe ſpots where the dwarf birch and alpine willows grow, and where *rhododendron*, *thalictrum*, and *ſaxifrages*, abound.

The bouquetins having their fore legs ſomewhat ſhorter than the hind legs, naturally aſcend with greater facility than they deſcend; for this reaſon nothing but the ſevereſt weather can engage them to come down into the lower regions; and even in winter, if there are a few fine days, they leave the woods and mount higher.

Winter is the ſeaſon of love with them, and principally the month of January. The females

go

go with young five months, and conſequently produce in the laſt week of June, or the firſt of July. At the time of parturition they ſeparate from the males, retire to the ſide of ſome rill, and generally bring forth only one young, though ſome naturaliſts affirm that they occaſionally produce two.

The common cry of the bouquetin is a ſhort ſharp whiſtle, not unlike that of the chamois, but of leſs continuance: ſometimes it makes a ſnort, and when young bleats.

The ſeaſon for hunting the bouquetin is towards the end of ſummer, and in autumn, during the months of Auguſt and September, when they are uſually in good condition. None but the inhabitants of the mountains engage in the chace; for it requires not only a head that can bear to look down from the greateſt heights without terror, addreſs and ſure-footedneſs in the moſt difficult and dangerous paſſes, and to be an excellent marksman, but alſo much ſtrength and vigour, to ſupport hunger, cold, and prodigious fatigue. The moſt determined hunters of bouquetins live in the mountains of the Lower Vallais: for inſtance, the natives of Servan, a village in a wild and picturesque ſituation, four leagues from Valorſine, and two or three from Martigny, are hunters, and the bouquetins being

ing no longer found in their mountains, they hunt in thoſe of the valley of Aoſt, obtaining a permiſſion for that purpoſe from the inhabitants.

Two or three hunters uſually aſſociate in this perilous occupation: they are armed with rifle-barrelled guns, and furniſhed with ſmall bags of proviſions; they paſs the night among rocks at conſiderable heights; they erect a miſerable hut of turf, where they lie without fire or covering, and on waking not unfrequently find the entrance blocked up with ſnow three or four feet in depth. Sometimes, in the purſuit of a bouquetin, being overtaken by darkneſs amid crags and precipices, they are obliged to paſs the whole night ſtanding, embraced in order to ſupport each other, and to prevent themſelves from ſleeping. As the bouquetins aſcend into the higher regions very early in the morning, it is neceſſary to gain the heights before them, otherwiſe they ſcent the hunter and betake themſelves to flight: it would then be in vain to follow them, for when once they begin to eſcape, they never ſtop till they think themſelves entirely out of danger, and will even ſometimes run for ten or twelve leagues.

The female ſhows much attachment to her young, and even defends it againſt eagles, wolves, and other enemies; ſhe takes refuge in ſome ca-

vern, and preſenting her head at the entrance of the hole, thus oppoſes the enemy.

When a bouquetin is ſhot, the hunters let it cool upon the ſpot, and then embowel it, putting the blood into one of the entrails, which is eſteemed by the peaſants a ſovereign remedy in pleuriſies and ſome other diſorders. A large bouquetin thus embowelled will weigh 180 or 200 pounds. A female weighs only from 70 to 80 pounds.

Some naturaliſts are of opinion, that the diminution of the race of bouquetins in the Alps is owing to his ſize, the monſtrous length and weight of the horns, which impede him in his courſe; becauſe he is driven into places where he can ſcarcely procure ſufficient nouriſhment during great part of the year, where his ſight becomes debilitated, and is frequently loſt by the ſtrong reflection of the ſun from the ice and ſnow. They conſider this animal rather as a native of the ſubalpine regions, which are covered during ſummer with the fineſt herbage, and where the bouquetins and chamois probably paſtured in tranquillity, when only the lower vallies and plains were inhabited.

On the contrary, it is maintained by others, that the bouquetin is endued with ſtrength proportionate to his ſize; and though he is inferior

to

to the chamois in livelineſs and agility, yet he is by no means deficient in activity; that his horns, though large and weighty, yet from their reclined poſition do not ſeem to be any impediment, but rather render him eſſential ſervice when he happens to fall, or purpoſely throws himſelf down precipices to avoid his purſuers. They add alſo, that his natural food is rather lichens than herbs; that he is particularly fond of the young ſhoots of trees and ſhrubs; and that in all the places where he inhabits, he is found in the coldeſt and rudeſt mountains, and on the ſteepeſt rocks. From theſe circumſtances, it is not improbable, that his preſent ſituation and manner of life is an effect of nature rather than neceſſity. Beſides, why do the chamois, who are more hunted than the bouquetin, ſtill inhabit the leſs elevated regions; and why are they not driven into the glaciers? To account for the preſent ſcarcity of the bouquetin, we need only conſider the number of its enemies, in men, beaſts, and birds of prey. Nor is there much cauſe for apprehenſions, that the race will be extinct even in the Alps. But allowing that the bouquetin was no longer found in his native Alps, ſtill we could not affirm with ſo much propriety that the race was extinct, as that it had migrated into a milder climate, and, with a ſtate of domeſtication and

more ſucculent food, had acquired ſofter manners, a form leſs rude, ſmaller and ſmoother horns. For it is even not improbable, that the *hircus ferus* or bouc-eſtain of Belon, the bouquetin of the Alps, the Siberian ibex, and ægagrus, both ſo accurately deſcribed by Pallas *, and the tame goat in all its different forms, are only varieties of the ſame ſpecies. Their difference in ſhape and manners may be ſufficiently accounted for from a change of climate, ſituation, and food; they are found to couple freely with each other; and are aſſerted to produce an offspring which is fertile.

They all have a beard, which ſeems to be the great characteriſtic diſtinction of this genus. They differ more or leſs from each other in the ſhape of their horns, ſize, and coat, none of which can be eſteemed certain ſpecific diſtinctions. The greateſt difference undoubtedly conſiſts in the horns, none of them, perhaps, except the bouquetin, having a longitudinal ridge, and ſome of them being even without the tranſverſe ridges. But this difference is leſs perceptible, in comparing the bouquetin with the Si-

* Perhaps alſo the *capra caucaſica*, deſcribed by Pallas, from the papers of Guldenſtaedt, and which he repreſents as differing from the ægagrus, with which it has been confounded by ſome naturaliſts. See Act. Petr. for 1779.

berian

berian ibex, the ibex with the ægagrus, and the ægagrus with the tame goat. Nor are the horns of the Alpine bouquetin ſo much weightier, longer, and larger, than thoſe of the abovementioned animals, as to form a *certain* ſpecific diſtinction *.

But even if this difference ſhould be ſtill greater, it could never be admitted as forming a ſpecific diſtinction. For the horns not only differ in individuals of the ſame ſpecies, but in the ſame individuals at different ages. If we were to attempt to arrange animals *ſolely* by their horns, the diſcriminations would be as endleſs as uncer-

* The horns of the bouquetin, as has been before obſerved, are ſometimes found to weigh ſixteen or eighteen pounds, to be three feet in length, and to have twenty-four tranſverſe ridges. A ſingle horn of a Siberian ibex weighed, according to Pallas, eight Ruſſian pounds, which is one tenth leſs than an Engliſh pound, and had ſixteen or eighteen tranſverſe ridges. The horns of another full grown Siberian ibex meaſured 2 feet 5 inches and 5 lines, along the curvature, and 1 foot 2 inches and 1 line, in a rectilinear direction. The horns of an ægagrus meaſured 2 feet 2 inches and 9 lines along the curvature, and 1 foot 4 inches in a linear direction. The horns of a full grown Caucaſan goat, were 2 feet 4 inches along the curvature, and 1 foot 6 inches in the linear direction. The longitudinal ridge or ridges remain then as the *only* ſpecific difference between the horns of the alpine bouquetin and thoſe of the other ſpecies. See the meaſurements in Pallas Spic. Zool. and in his Deſcription of the Capra Caucaſica, in Act. Petr. for 1779.

tain. But if, in the preſent inſtance, the alpine bouquetin and the other ſpecies of the goat genus ſhould be excepted from this general aſſertion, we have only to add, that M. van Berchem poſſeſſes the horns of a young one, produced from the union of the bouquetin and ſhe-goat, that are exactly ſimilar to the horns of the ægagrus, which, as Pallas aſſerts, reſemble thoſe of the tame goat. Climate and nutriment muſt have a great effect upon the horns of animals. The female of the bouquetin has horns very like thoſe of the tame goat. It is no wonder, therefore, if a long ſervitude, an inactive life, an exchange from the aromatic plants and pure air of the mountains to a groſs nutriment and a moiſter atmoſphere, ſhould diminiſh the horns, alter their ſhape, ſubdue the longitudinal ridge, and convert the knobs into wrinkles.

The Count de Buffon extends the goat genus ſtill further, and comprehends under it even the chamois; conjecturing, that the bouquetin is the male in the original race of goats, and the chamois the female. The French naturaliſt having, at the time when he deſcribed the bouquetin, never ſeen it in a full grown ſtate, was probably induced to entertain this opinion from a faint reſemblance between the female bouquetin and the chamois. But there does not ſeem the leaſt foundation

foundation for this notion, the chamois being an animal totally diſtinct from the goats, never coupling with them, and judiciouſly claſſed by Pallas and Pennant in the genus of antelopes. His conjecture, however, that the bouquetin is the original ſource of all the tame goats ſeems to be well founded; and has been adopted by the greateſt part of ſucceeding naturaliſts. And as, according to the juſt obſervations of Pallas, the ægagrus approaches nearer than the bouquetin to the tame goat in its form and horns, the ægagrus may be the link which unites the bouquetin and the tame goat. May not the ægagrus be conſidered as a race produced from the bouquetin and the ſhe-goat, or the goat and female bouquetin? Pallas alſo conjectures, that the tame goat may poſſibly have been propagated from the ægagrus and Siberian ibex, which is allowed by moſt naturaliſts to be the ſame as the bouquetin; and Pennant remarks, with no leſs ſagacity, that the tame goats may be derived from both, as we are aſſured that the ibex and ſhe-goat will produce a ſimilar offspring. It is alſo probable, that the bouquetin is the origin of all the goat genus, becauſe it is the largeſt, ſtrongeſt, and dwells in the moſt inhoſpitable regions. For, according to the obſervation of the ſame great

zoologiſt *, whom we have ſo often quoted, thoſe animals who are natives of the coldeſt mountains muſt, on deſcending into the warm plains, be liable to greater changes than thoſe who are formed for milder climates; and this circumſtance ſeems ſufficient to account for the great variety obſervable in the goat genus.

Some naturaliſts pretend, that the bouquetin cannot be the original ſtock from whence the goats have been produced, becauſe, as he inhabits only the loftieſt ſummits and rocks covered with eternal ſnow, and feeds only on plants peculiar to high regions, he cannot be domeſticated in a variety of climates. But this opinion is contradicted by fact and experience. Stumpf, the hiſtorian of Switzerland, informs us, that the Vallaiſans near Sion bred up tame bouquetins with their goats; and Belon relates, that the Cretans tamed the young bouc-eſtains by giving them to be ſuckled by the goats. Dr. Pallas alſo relates, that he has frequently ſeen the Siberian ibex among the tame goats, and mentions one in particular at Orenburgh, which was leader of a flock, and father of a numerous offſpring more reſembling the females than himſelf. He was very different from the tame he-goats,

* Pallas,

ſcarcely

ſcarcely inferior in ſize to a bouquetin two years old: in colour and ſtrength he reſembled the wild animal; had thick horns, knobbed, not keeled above, and a long rough coat, but no where pendent, except in the beard: the black liſt on the back was almoſt obliterated. And laſtly, Mr. van Berchem ſaw ſeveral tame bouquetins at Aigle. They were gentle and familiar; and, without being remarkably lively, were active and graceful in all their motions. They bred with different ſhe-goats, and Mr. van Berchem ſaw the young ones, which ſeemed to form a new race.

If theſe obſervations ſhould be well founded, the goat genus, or race of the bouquetin, is found in a wild ſtate along the chain of mountains that traverſes the temperate parts both of Europe and Aſia; on the Alps, Pyrenees, and Carpathian mountains; on the Taurus and Caucaſus; on the mountains of Siberia and Tartary; in Kamtchatka; on the iſlands of the Archipelago; in Hedsjæas in Arabia; in India; perhaps in Ægypt and Lybia *.

LETTER

* A chronological liſt of the authors who have mentioned, deſcribed, or figured the bouquetin and ægagrus, is here ſubjoined.

1548. J. Rudolph.

LETTER 42.

Journey to Geneva—Pays de Vaud—Lauſanne—Felix the Fifth—Vevay—Tomb and Character of General Ludlow—Clarens—Meillerie.

HAVING quitted the delightful vale of Chamouny and its magnificent ſcenery, we continued our route towards Geneva. As we proceeded,

1548. J. Rudolph. Stumpf. Gemeine Eidgenoſſenchaft Beſchreibung. Zurich, folio. A good account, tranſlated into Latin, inſerted in Geſner's work, and tranſcribed by many ſucceeding naturaliſts.

1551. Conradi Geſneri Hiſtoria Quadrupedum. Tiguri, folio. At page 331, &c. is an ample account, from the antients, Stumpf, and others, with a ſmall figure. At page 1099, however, it is tolerably well figured.

1554. Belon Obſervations. French edition, p. 20. A good deſcription of the animal in Crete, with a moderate figure.—Latin edition, by Cluſius, 1605, p. 20. The figure ſmall and very indifferent.

1617. Sprecher Pallas Rhetica.

1621. Ulyſſis Aldrovandi Quadrupedum Biſulcorum Hiſtoria. p. 730. fig. 732. Bad.

1657. Joan. Jonſton, M. D. Hiſtoria Naturalis de Quadrupedibus. Amſtel. folio. Page 53. t. 25. f. 1. and t. 28. f. 3, the latter from Geſner.

1674. Olearii

proceeded, the height of the mountains gradually diminiſhed; and the ſeveral vallies, through which we paſſed, were agreeably diverſified in their figures and productions. We followed the courſe

1674. Olearii Gatterſiſche Kunſt Kammer. Tab. 10. fig. 1. Head and horns.

1677. Charletoni Exercitationes. Oxon. folio. Pag. 10.

1680. Joh. Jac. Wagner, M. D. Hiſtoria Naturalis Helvetiæ curioſa. Tiguri. 12mo. At p. 176. a ſhort account.

1693. Jo. Raii Synopſis Quadrupedum. Lond. 8vo. At p. 77. a ſhort deſcription.

1734. Repreſentation des Animaux de la Menagerie de S. A. S. Monſeigneur le Prince Eugene. Figures of two males, the female and two young ones, in the laſt plate. They are called Chamois, but are bouquetins.

1740. Ridinger Abbildung der Jagtbaren Thiere, tab. 11.

1748. Linnæi Syſtema Naturæ, Holm. 8vo.

1751. Klein Hiſtoria Quadrupedum, p. 16. Deſcription from Geſner.

1756. Guil. Henr. Kramer Elenchus Vegetabilium et Animalium per Auſtriam Inferiorem obſervatorem. Viennæ, &c. 8vo. p. 321.

Briſſon Regnum Animale, 4to. p. 64.—8vo. 1762. p. 39.

1764. Buffon Hiſtoire Naturelle, 4to. vol. xii. p. 136. tab. 13. a bad figure of a young one; tab. 14. a good pair of horns.

1766. Caroli a Linné Syſtema Naturæ, edit. 12. Holm. 8vo. p. 95.

1771. Pennant's Synopſis of Quadrupeds, 8vo. p. 13.

1776. P. S.

courſe of the ſonorous and violent Arve; and near Salenche we came to a deſcent, where on our right hand we deſcried a ſmall lake, the ſituation whereof is extremely picturesque; and whoſe borders, ſkirted with wood, are pleaſing and diverſified. From hence we deſcended into the plain, which continues almoſt perfectly level to Geneva. Salenche lies at the bottom of a broad valley, which here contracts to a narrow paſs. Tradition ſays, that this little plain was once a lake; and indeed its form, and the quality

1776. P. S. Pallas Spicilegia Zoologica. Faſcic. undecimus Berol. 4to. p. 31. t. 3.—and t. 5. f. 4. contains deſcriptions of the ibex and ægagrus, and gives figures of the horns of the Alpine and Siberian bouquetin, and of the ægagrus.

1777. Erxleben Syſtema Regni Animalis. Lipſiæ. 8vo. p. 261.

1777. Zimmerman's Specimen Zoologiæ Geographiæ Quadrupedum. Lugduni Bat. 4to. p. 166.

This curious and learned work, improved and enlarged, was publiſhed in 1780, by the author in the German tongue, under the following title:

Zimmerman's Geographiſche Geſchichte, &c. 3 vols. 8vo. Leipſic. 1780.

1781. Pennant's Hiſtory of Quadrupeds. Article Ibex and Caucaſan Goat.

1786. Rozier Obſervations ſur la Phyſique, ſur l'Hiſtoire Naturelle, &c. Par. quarto. tome 28, 29. Girtanner, Van Berchem, & Guldenſtædt.

1787. Pennant's Arctic Zoology.

of

of the ſoil, ſeem to juſtify tradition: great part is laid waſte by the unruly Arve, which frequently overflows its banks; and the reſt is moſtly covered with fruit-trees.

Not far from Magland we ſtopped to admire a beautiful fall of water, called the caſcade of Arpenas, which ruſhes, like the Staubbach, from an impending rock. When I ſaw it, there was a conſiderable wind, which drove the torrent, ſoon after its leaving the rock, at leaſt an hundred yards out of the perpendicular direction, into an almoſt imperceptible ſpray: I then beheld it trickling down the ſides of the mountains in a thouſand little ſtreams, which united at a ridge; and from thence formed three caſcades. The body of water was much more conſiderable * than that of the Staubbach; and the fall appeared to me altogether as high. Between Magland and Cluſe we took a guide to conduct us to the cave of *la Balme*. Though the aſcent was not very long, yet it was ſo ſteep that we were nearly an hour in reaching it: we then ſcrambled along a precipice, from which we mounted a ladder; and by the aid of the branches of a nut-tree growing from the rock, we pulled ourſelves into a natural

* It may be neceſſary to apprize the traveller, that, in dry ſummers, this caſcade is ſometimes almoſt deſtitute of water, leſt, ſeeing it under that circumſtance, he ſhould conceive the deſcription in the text to be too much exaggerated.

cavern more than a quarter of a mile in length, and forming various branches that led into lofty vaults and ſpacious openings; but the ſight of which did not anſwer the trouble required to enter it.

We paſſed the night at Cluſe, which is ſituated by the ſide of the Arve; and the next morning came down the banks of that river to Bonneville, the capital of Faucigny: it ſtands alſo upon the Arve, at the bottom of a chain of rocks, which from this place diminiſh into hills. All this part of Faucigny, as alſo a ſmall ſtrip of Chablais through which we paſſed, is a rich plain, that produces wine and corn in great plenty; but is neither populous nor well cultivated. By the little village of Chene we entered into the territory of Geneva: the ſudden change from the poverty of the Savoyards to the neatneſs and eaſe of the Genevans, the populouſneſs of the country, the richneſs of its cultivation, and the number of country-ſeats ſcattered about the fields, were circumſtances, that affected me with a pleaſing ſatisfaction.

As I propoſe viſiting Geneva again, in my way to the ſouth of France, I will defer giving any account of that intereſting town until my return.

We went from Geneva to Craſſi, a ſmall village in the Pays de Vaud, where we paſſed a day with

with an Engliſh gentleman, who has taken a houſe for the ſummer in that delightful ſpot. In our way to Craſſi we paſſed through Verſoi, a little village in the French territories, upon the lake of Geneva: it goes by the name of *Choiſeul's Folly*. Geneva having fallen under the diſpleaſure of France; that miniſter endeavouring to take advantage of the troubles in 1768, laid a plan to ruin the town, and to monopoliſe the whole trade of the lake. Accordingly he fixed upon Verſoi as a ſituation the moſt proper, upon which to build a large town. For this purpoſe, he began by ſinking a pier and making an harbour: he conſtructed alſo a frigate; marked out the ſtreets; ſent a conſiderable quantity of ſtone to build the houſes; ordered a garriſon, and erected huts for them, in which they continued ſome time. Nevertheleſs, when the harbour was nearly finiſhed, and government had expended about £. 125,000, the ſcheme was relinquiſhed.

The road from Geneva to Lauſanne runs through the *Pays de Vaud*, a region of which hiſtorians and travellers ſpeak with rapture; particularly of that part which borders upon the lake of Geneva: and indeed a more delightful country cannot well be imagined. It is, almoſt the whole way, a gradual aſcent from the edge

of

of the lake, richly laid out in vineyards, corn-fields, and luxuriant meadows; and checquered with continued hamlets, villages, and towns: the ſhores are generally of the cleaneſt gravel; and the water is of ſo fine a tranſparency, that you may ſee the bottom to a very conſiderable depth.

We paſſed through Nyon, which ſtands delightfully upon the edge of the lake, and in the very point where it begins to widen. It was formerly called *Colonia Equeſtris Noiodunum*; and, as a proof of its antiquity, ſeveral Roman inſcriptions, and other antient remains, have been frequently diſcovered in the out-ſkirts of the town. In this part the lake forms a beautiful curve, happily alluded to by Lucan, where he mentions the army of Julius Cæſar ſtriking their tents, which were poſted on the borders.

Deſeruere CAVO *tentoria fixa Lemano* *.

All the poſſeſſions in this country formerly belonging to the duke of Savoy, were wreſted from him in the war, which the canton of Berne declared againſt him, in 1536, in defence of Geneva: and in the ſame year the reformation

* "They ſtrike their tents and quit the *hollow bend*
"Of Leman's lake."

was

was introduced. From that period all the Pays de Vaud, excepting the common bailliages of Granſon, Orbe, and a ſmall portion of it which was ceded to Friburgh, has been ſubject to Berne, and makes part of that canton.

Morges, which is ſituated at the extremity of a beautiful bay, is the neateſt town in theſe parts. The environs are extremely pleaſant; the banks of the lake form an amphitheatre gently riſing to the Jura; and Mont Blanc preſents itſelf through an immenſe opening in the oppoſite chain of rocks, which ſeems to have been formed by nature in order to exhibit a ſublime perſpective of that beautiful mountain. Near the town is a lime-tree of a great ſize, being twenty-four feet four inches in circumference, and with branches of magnificent extent; it has a companion about three feet leſs in girth. Mr. Pennant informs me, that "this tree is a native of Switzerland, and of many other parts of the continent; that it was imported into England before the year 1562; one being deſcribed by Dr. William Turner as growing in a park near Colcheſter; that one thirty-ſix feet in circumference grew near the great church at Berne; it was planted about the year 1410; and its hollow trunk, ſtill putting forth leaves, was

to be ſeen in the year 1702 *. The Germans, in old times, were fond of planting the lime before their churches and in the market-places, on account of its grateful ſhade. This tree is now grown much out of uſe; yet the Romans eſteemed it ſo highly, as to ſay that it was employed for a thouſand purpoſes, *tiliæ ad mille uſus petendæ.* A ſweet juice exudes from the leaves and bark, from which the Poles extract a honey called by them Liepiz †. Bees are alſo fond of the flowers; for that reaſon Virgil, in his beautiful deſcription of the induſtrious Corycian, places the lime and the pine in the neighbourhood of his hives."

Lauſanne contains about ſeven thouſand inhabitants: it is built upon an aſcent ſo ſteep, that in ſome places the horſes cannot, without

* A large lime is to be ſeen on the heights above Villars, a ſeat belonging to Mr. Graffenred of Berne, near Morat. Its girth meaſures at leaſt thirty-ſix feet in circumference, and its height is not leſs than ninety feet. It is very antient, as it was lopped in 1550, for the ſake of the bark. The traveller who viſits this tree, will be no leſs gratified with an extenſive proſpect, commanding the lakes of Morat, Neuchatel, and Bienne, and that ſtupendous chain of ſnowy alps, which is repreſented on the engraving inſerted in this volume.

† ——— *cogere preſſis*
Mella favis; illi tilia, atque uberrima pinus.

great difficulty, draw up a carriage; and foot-paſſengers aſcend to the upper part of the town by ſteps. But theſe inconveniences are amply compenſated by the ſublimeſt views in nature, commanding the lake of Geneva, the Pays de Vaud, and the rugged coaſt of Chablais.

The ſame year in which part of the Pays de Vaud was conquered from the houſe of Savoy, the biſhop of Lauſanne, retiring from the town, the inhabitants put themſelves under the protection and ſovereignty of the canton of Berne; which confirmed and augmented their privileges. At preſent, Lauſanne is governed by its own magiſtrates; has its own courts of juſtice; and, what is very ſingular, the citizens, who poſſeſs houſes in the principal ſtreet, enjoy the privilege of pronouncing ſentence in criminal cauſes. The criminal is tried by the civil power: if he is found, and acknowledges himſelf guilty, the burghers of this ſtreet aſſemble; one of the magiſtrates pleads in defence of the priſoner, and another againſt him; the court of juſtice give their opinion upon the point of law; and the majority of the citizens, poſſeſſing houſes in the principal ſtreet, determine the penalty. If the puniſhment is capital, there is, according to the letter of the law, no pardon, unleſs obtained within twenty-four hours from the ſovereign

council of Berne; although it generally happens, that eight days are granted for that purpoſe. When the criminal is ſeized within the juriſdiction of the town; the fact is tried, and the burghers pronounce ſentence, in the town-hall: in this caſe there is no appeal. But, when he is taken within the diſtrict of the bailif, they aſſemble in his houſe; and an appeal lies from their determination to Berne. I have been the more particular in my inquiries concerning the mode of this criminal proceſs, from the ſtrong reſemblance it bears, in ſome reſpects, to our trial by juries.

Here is an academy for the ſtudents of this country: profeſſors in every ſcience are appointed by government; and there is a tolerable library for the uſe of the public.

I have ſeveral times had the good fortune to meet Tiſſot, the celebrated phyſician of this place; well known in the literary world for his excellent writings upon ſeveral medical ſubjects. His converſation is uncommonly intereſting; as, beſides his ſkill in his profeſſion, he is well verſed in every branch of polite literature. His private character is no leſs reſpectable than his public; and he is as much eſteemed for his great humanity as for his ſuperior knowledge.

The church of Lauſanne, formerly the cathedral,

dral, is a magnificent gothic building, ſtanding on the moſt elevated part of the town. It contains, among many other ſepulchres, the tomb of Amadeus the Eighth, duke of Savoy, ſtyled the Solomon of his age; but more known by the name of the anti-pope Felix the Fifth; who exhibited a ſingular inſtance in the annals of Europe, of a perſonage *twice* abdicating the pomp of ſovereignty, and *twice* retiring to a private ſtation.

Having paſſed his early youth and opening manhood in the purſuits of ambition, he enlarged his dominions by the acquiſition of the Genevois and Piedmont, and obtained an increaſe of rank by the erection of Savoy into a dutchy. Yet in the midſt of his greateſt ſucceſs, and when fortune ſeemed moſt propitious, the ſudden death of a beloved wife, and a narrow eſcape from aſſaſſination, inſpired him with ſuch a diſguſt of the world, that he reſigned, in 1434, the adminiſtration of his eſtates to his eldeſt ſon; and, accompanied with a few lords of his court, retired to a palace at La Ripaille, on the borders of the lake of Geneva. In this palace, which he called an *hermitage*, he enjoyed, with an apparent indifference to the affairs of the world, a calm and tranquillity that ſeemed incompatible with his former aſpiring ambition; until he was ſud-

denly called forth to public notice in a more exalted ſtation.

The council of Baſle having depoſed Eugenius the Fourth, induced, according to ſome authors, by the reputation which Amadeus had acquired for ſanctity, influenced, according to others, by his largeſſes and intrigues, raiſed the *hermit* of La Ripaille to the papal throne. This event took place in 1439: the new pontiff quitting his favourite retreat, accepted the proffered dignity, either with a real or affected reluctance, and aſſumed the name of Felix the Fifth.

The æra of his diſputed pontificate was marked with turbulence and anarchy. In order to avoid the ſtorms which agitated Europe, and to favour the natural indolence of his temper, he frequently retreated to his beloved hermitage, and directed the affairs of the church from that ſequeſtered corner. Conſcious at length that his acceptance of the papacy ſerved to widen inſtead of healing the ſchiſm of the church; finding that he was oppoſed by the moſt powerful princes of Europe; that, on the death of his rival Eugenius, the cardinals of Rome had choſen another pope; and being ill ſupported by the remains of the council of Baſle, he terminated the ſchiſm by reſigning the papal tiara in favour of Nicholas the Fifth. In this tranſaction he proved his talents

for

for negotiation by obtaining the following conditions: that he ſhould enjoy the next rank to the pope; that he ſhould be appointed vicar of the Roman ſee; and that all the acts paſſed in his pontificate ſhould be valid. On his reſignation he fixed his reſidence at La Ripaille, and died in 1451.

Felix the Fifth has ſhared the fate of many equivocal characters. By ſome he is repreſented as a ſaint, by others as covering the moſt ambitious deſigns under the maſk of ſanctity; by the former, his reſidence at La Ripaille is deſcribed as the retreat of religious auſterity; by the latter, as the ſeat of luxury. In this, as in moſt other caſes, both parties ſeem to have exceeded the truth. On reviewing the principal events of his life, we may conclude, that a palace built by a ſovereign prince, in which he was accompanied by many lords of his court, where he inſtituted an order of knighthood, and where he reſided with the pomp and dignity of a ſovereign pontiff, could be no common *hermitage*; and that he aſſumed the name, rather than paſſed the life, of a *hermit*; while the power and rank which he ſecured to himſelf, on his reſignation of the papacy, ſufficiently demonſtrate, that he never intended to renounce the world. On the contrary, ſhould we admit, that his life at La Ripaille

was not embittered by penance and mortifications; yet as no contemporary authors, even thoſe who were by no means partial to his character, have ſtigmatiſed his retirement, we ought not haſtily to conclude, that it was the retreat of a mere voluptuary. But in whatever light his moral qualities may be conſidered, no one can withhold from him the character of an able politician.

It is not my intention to enter into a general or particular deſcription of the Roman antiquities, which have been found in Switzerland; if you are curious in reſearches of that ſort, I muſt refer you to Bochart, Miller, Spon, and other antiquarians, who have treated minutely of that ſubject. I cannot, however, avoid mentioning two lately-diſcovered Roman monuments, which are placed in the garden of Mr. Levade, near the church at Lauſanne.

The firſt is an altar of white marble with red veins, and was found, in 1782, by ſome workmen in digging the foundations of a houſe in the town of Vevay. It is broken in a horizontal direction; and what remains is a foot and a half long and a foot high. The inſcription, though not entire, proves it to be an altar erected by the twentieth legion to the god Silvanus.

DEO

DEO SILVANO
ESPER URSUL.
FICIO LEG. XX.
DIC

The ſecond monument is a Roman mile-ſtone, which was diſcovered in a vineyard near Pauda, a few paces from the high road.

It bears the following inſcription:

Imp.
Cæs T. Æ. Avg
Antonino
Pio · P M. Krib ·
Cos. III. P. P.
Avent: M. P. T
XXXVIII.

This inſcription aſcertains a fact long unknown to the Swiſs antiquarians. Bochart, among others, expreſſes his ſurpriſe, that no inſcription, bearing the name Antoninus Pius, who was ſo great a benefactor to the antient Helvetians, has been as yet found in Switzerland. But this mile-ſtone, which was put up in the third conſulſhip of that emperor, proves the exiſtence of ſuch an inſcription; and is probably the prelude to the diſcovery of other monuments erected in his honour.

The

The road from Lauſanne to Vevay, runs along the ſides of the mountains, between continued ranges of vineyards. The induſtry of the Swiſs is no where more obſervable than in theſe parts: the mountains in many places, though naturally conſiſting of a bare ſteep rock, are thickly covered with vines. The mould has been brought from other grounds, in order to create a ſoil, and is ſupported by rows of ſtones ranged in ſtrait lines like walls.

But this mode of culture however advantageous, and even neceſſary to the natives, occaſions a diſagreeable uniformity in the face of the country. The vines alſo do not form a pleaſing and picturesque appearance, like thoſe of the Valte-l'Oe *, which are carried in beautiful feſtoons from tree to tree. The plants are low, and faſtened to poles about four feet in height; and the high walls which encloſe them, and border the road, frequently interrupt the view.

This diſtrict between Lauſanne and Vevay is called *La Vaux*, and contains the two pleaſant little towns of Lutry and Cully; as alſo the two villages of St. Saphorin † and Corſier: it is entirely

* See vol. iii.

† In the church of St. Saphorin, is an antient Roman mile-

tirely hilly, riſing abruptly from the lake. Above the vineyards, are rich meadows, and a continued foreſt.

Vevay, the antient *Vibiſcum*, is the principal town of the bailliage of that name: it is clean and well built, ſtands in a ſmall plain at the foot of the mountains on the edge of the water, and is one of the few towns in the canton of Berne which carry on any trade. The borders of this part of the lake are much more contraſted, wild, and pictureſque, than thoſe about Ge-

mile-ſtone, found near that village, with the following inſcription:

TI. CLAVDIVS. DRVSI. F.
CÆS. AVG. GERM.
PONT. MAX. TRIB. POT. VII.
IMP. XII. P. P. COS. IIII.
F A
XXXVII.

This inſcription aſcertains two circumſtances, which have been frequently called in queſtion; namely, that the banks of the lake of Geneva, which border this part of Switzerland, were compriſed within a Roman province, even ſo early as the time of Claudius; and alſo, that *Aventicum* was the chief town of this part of Helvetia: for, the mile-ſtones always referred to the capital town of the province in which they were placed. From St. Saphorin to *Avenches* is exactly 37,000 paces; which anſwer to the 37th mile-ſtone.

neva;

neva: the mountains of the Vallais and Savoy boldly project into the water, and form a ſemi-circular chain that encloſes the lake, except where they are divided by the Rhone; which flows into it a few leagues from Vevay.

Vevay is diſtinguiſhed as being the reſidence of Edmund Ludlow, the famous parliamentary general, whoſe name ſtands foremoſt among the few perſons, who, in thoſe times of miſrule and confuſion, uniformly acted with conſiſtency and dignity. True to his republican principles, he no leſs violently oppoſed the daring uſurpation of Cromwell, than the arbitrary meaſures of Charles the Firſt; and could never be prevailed upon, either by threats or promiſes, to deſert the cauſe, which he conſidered as the cauſe of juſtice and liberty.

Being excepted, as one of the king's judges, from the act of indemnity paſſed at the reſtoration of Charles the Second, he wandered, without any fixed place of reſidence, until he found an aſylum from the baſe attempts of his enemies at Vevay, under the protection of Berne.

At the important period of the revolution, he returned to England, anxious to ſerve his country under our great deliverer; and William

liam the Third, whoſe mind roſe ſuperior to the narrow prejudices of party, was no leſs deſirous to employ a general of ſuch approved experience and fidelity. But the king being addreſſed by the Houſe of Commons to iſſue a proclamation for apprehending Ludlow, at the moment his majeſty was going to employ him; he was accordingly compelled to quit England at this critical period, and again ſettled at Vevay. We may collect from his general character and conduct, that if he had been permitted to ſerve his country, he would have ſucceſsfully employed his great military talents againſt the aſſertors of bigotry and deſpotiſm; and with the ſame zeal, which he had diſplayed in oppoſing an arbitrary government, would have ſupported the new adminiſtration; when the enormous prerogatives of the crown, againſt which he had unſheathed his ſword, were aboliſhed by law; and the freedom of the ſubject was eſtabliſhed on the baſis of equal liberty under the authority of a limited monarch.

He died in 1693, in the ſixty-fourth year of his age; and was interred in the church of Vevay. His monument is a plain grave-ſtone of black marble, containing a Latin inſcription, which is printed in Addiſon's Travels. The

houſe

houſe which he formerly inhabited ſtands near the gate leading to the Vallais, and the following motto is inſcribed over the door, which is ſtill preſerved out of reſpect to his memory. *Omne ſolum forti patria eſt, quia patris.*

The Memoirs of Ludlow are written in a ſimple and perſpicuous ſtile; with the fidelity of a man who was actually engaged in the ſcenes which he deſcribes, and with the ſpirit of a general zealous in the cauſe which he had eſpouſed and defended. Perhaps his animated detail of the trial and execution of the Regicides is ſcarcely ſurpaſſed by any narrative in antient or modern hiſtory.

Nature can ſcarcely form a poſition more delightful than that of Chatillard or Clarens. It ſtands, not far from Vevay, above the village of Clarens, on an eminence, whoſe gentle declivity ſlopes gradually towards the lake: it commands a view of that majeſtic body of water, its fertile borders, and the bold rocks and alps of Savoy. The adjacent ſcenery conſiſts of vineyards, fields of corn and paſture, and rich groves of oak, aſh, and Spaniſh cheſnut-trees. Although the ſituation and environs harmonize with the animated ſcenery in the Eloiſe of Rouſſeau, yet the caſtle by no means accords with

with the deſcription in the ſame work. The traveller ſees an oblong building with antient towers and a penthouſe roof; in the inſide a large hall that looks like a priſon; and the whole bears rather the antiquated appearance of a feudal manſion inhabited by ſome turbulent baron, than the reſidence of the elegant and impaſſioned Julie.

Oppoſite to Clarens, on the other ſhore of the lake, are the dark gloomy rocks of Meillerie. That village lies in the receſs of a ſmall bay, at the foot of impending mountains, in ſome parts gently ſloping, and clothed to the water's edge with dark foreſts; in others naked and perpendicular, bringing to recollection the fancied rocks of Leucate *.

Theſe are the ſcenes of the Nouvelle Eloiſe. Having obtained that novel at a circulating library in Lauſanne, I continued, during theſe expeditions, to examine the poſition of the country, and compare it with the deſcriptions of Rouſſeau. Small objects may be magnified;

* Je n'ai plus qu'un mot à vous dire, ô Julie. Vous connoiſſez l'antique uſage du *rocher de Leucate*, dernier refuge des amans malheureux. Ce lieu-ci lui reſſemble à bien des égards. La roche eſt eſcarpée, l'eau eſt profonde, & je ſuis au deſeſpoir.

but

but no pencil, however animated, can delineate the wonderful and ſublime works of nature; even the warm colouring of Rouſſeau has not equalled the beauty of the ſituations. I read with attention the principal parts of that ſingular performance; and having now the ſcenery before me, I dwelt more particularly upon that letter, in which St. Preux relates his expedition to Meillerie; wherein love and deſpair are worked up almoſt to madneſs. Open that performance, read that letter, and conſider that part of it, where St. Preux points out the number of towns and villages, the continued fertility and high cultivation of the Pays de Vaud, and contraſts it with the gloomy coaſt of Chablais, exhibiting only a few towns lying on the edge of the water; you will then ſee the happy and ſuperior effects of liberty under a mild and equitable government, like that of Berne.

I am, &c.

LETTER 43.

Caſtle of Chillon—Villeneuve—Aigle—Salt-Works of Bex and Aigle.

TRAVELLERS not unuſually make an agreeable excurſion from Vevay to the ſalt-works of Bex and Aigle.

The road continues along a plain, with hills on one ſide, and the lake on the other. Haller's judicious diſtinction of the elevated part of this country, may from this ſpot be well exemplified. The rocky alps are ſeen with their pyramidal tops ſhooting into the heavens, and incruſted with eternal ice and ſnow. Snow likewiſe, at various intervals, covers the ſteep ſlopes beneath the aſpiring peaks; rich paſturage ſucceeds; and the bottoms are verdant with foreſts of firs. The mountains, ſuch as the Jura and thoſe riſing towards Denis and Gruyeres, are fertile in graſs, well wooded, their tops even, extenſive and arable; and though with little appearance of rock on the ſur-

face, yet internally filled with a hard yellowiſh ſtone fit for building, but impatient of the chiſſel. The *collines*, or little hills, are frequent at the foot of the mountains, and ſeparated by little vallies watered by ſmall brooks.

The further I advanced, the nearer the mountains approached the lake; their nature changed, their height increaſed, and their craggy tops and wooded ſides convinced me, that I was approaching the genuine alps. Above the woods ſoared, in a moſt picturesque manner, a lofty pyramidal crag called *Le Dent de Jamant*. The woods were firs mixed with oak. The road lay cloſe to the water's edge. The caſtle of Chillon, or rather the caſtellated houſe, is a large pile with round and ſquare towers: it ſtands on a rock in the lake, and is connected to the land by a drawbridge. The vaults are very fine; the arched roofs, and the pillars which ſupport it, are in a neat gothic ſtile. This caſtle, in 1536, was wreſted from Charles the Third of Savoy by the canton of Berne, aſſiſted by the Genevans, who furniſhed a frigate (their naval force) to beſiege it by water. In a deep dungeon, below the level of the lake, the conquerors found Bonivard, prior of St. Victor, the intrepid antagoniſt of the dukes of Savoy; and the great aſſerter of Gene-

van

van independence. He had been impriſoned by the Savoyards, during ſix years; and, by conſtant walking in his ſhort limits, had worn a hollow in the rock. This caſtle was for a ſhort time the reſidence of a bailif from Berne, until a more convenient houſe was purchaſed for that officer in Vevay. About half a league further is Villeneuve, a ſmall town at the extremity of the lake. I travelled along the concave ſide of this magnificent piece of water from Geneva to Villeneuve fifty-four miles. It is in the ſhape of a creſcent; Switzerland forms the hollow; Savoy the convex part; its greateſt breadth is from St. Sulpice to Grande Rive, where it is twelve miles wide. Savoy affords a rude and awful boundary of aſpiring alps, craggy and covered with the ice of ages. The country from Geneva to the environs of Lauſanne, ſlopes for a conſiderable way to the margin of the lake, and is enriched with all the varieties which nature can beſtow. The long ridge of the Jura, fertile in paſturage, and varied with woods, backs this beautiful tract. Near Lauſanne the banks riſe very conſiderably, and form a moſt charming terrace. A few miles beyond Lauſanne is a rapid deſcent. Near Vevay begins a plain, which is continued far beyond the end of the lake, but contracting, by the approach of the

mountains, towards the water. The colour of the water is extremely beautiful, clear, and at a diſtance ſeems of a moſt lovely blue.

Near Geneva the coaſt abounds in ſmall pebbles covered with a brown incruſtation. From Geneva as far as Lauſanne the ſhores are ſandy; but from Lauſanne to Chillon appear ledges of rocks hard and calcareous: the extremity of the lake is a marſh formed by the collected mud of the Rhone.

The depth is various. M. de Luc aſſerts, that on ſounding it he had found the greateſt depth to be a hundred and ſixty fathoms; like all inland lakes encloſed within high mountains, it is ſubject to ſudden ſtorms.

I am uncertain whether any birds frequent the lake which are not common to the reſt of Switzerland. The tippet grebes * appear here in December and retire in February. The ſkins are an elegant article of luxury, and ſell for about twelve or fourteen ſhillings each. Theſe birds are obliged to breed in other places, this lake being almoſt totally deſtitute of reeds and ruſhes, in which they form their floating neſt. From Villeneuve the road runs through a beautiful valley, conſiſting of the richeſt meadow and corn land, very populous and finely wooded, and

* Pennant's Brit. Zool. vol. ii. No. 222.

expanding

expanding to the breadth of four miles. The alps bound each ſide, with tops broken into vaſt crags of various forms.

I paſſed near La Roche, where a director of the ſalt-works is deputed by the government of Berne; and which is rendered memorable by the reſidence of Haller, who filled that office from 1758 to 1766. During his retirement in this place, that diſtinguiſhed man prepared for public inſpection many of his numerous publications, and particularly his immortal work on phyſiology.

I left at a little diſtance Yvorne, ruined, in 1584, by the lapſe of a mountain occaſioned by an earthquake; croſſed the torrent called La Grande Eau, and halted at Aigle, a good town; ſeated at the feet of ſome ſmall round hills prettily covered with firs. This country was conquered from the Savoyards by Berne in 1475, and was made a diſtinct government conſiſting of four *Mandemens*. The governor reſides at Aigle. It formerly had its particular heads, the family of Torrens; but the laſt count formally reſigned his pretenſions at Berne in 1553. This government of Aigle reaches to the Pays de Vaud; and, when under the dominion of the houſe of Savoy, was compriſed within that

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diſtrict; at preſent it is claſſed under the German diviſion of that canton, although French is the language of the natives. Further on the valley is greatly contracted, and ſo filled with trees as to appear a great foreſt. The laburnum abounds here in a wild ſtate. The wood is beautifully veined, of great ſtrength, and much uſed for wedges and muſical inſtruments. The variety with ſhort ſpikes of flowers has the moſt elegant veins, and is called the *ebony* of the Alps: Pliny ſays its wood is the hardeſt next to the ebony. The cornelian cherry is common in the hedges, and the fruit is frequently preſerved with ſugar. The *Machaleb* cherry, or *Prunus Machaleb*, is to be found in theſe parts; the wood is red, of fine ſcent, and in requeſt for handles of knives, it is known among cutlers by the name of *Bois de St. Lucie.* A pleaſant-ſcented water is diſtilled from this tree; and the ſeeds are uſed to give a fragrancy to ſoap.

Between Aigle and Bex is a moſt pictureſque view of the caſtle of St. Tryphon, on the ſummit of a lofty inſulated rock in the middle of the plain; it is quite ſurrounded with wood, and realiſes Milton's deſcription of an antient caſtle,

"*Boſom'd high in tufted trees.*"

I am

I am informed it is built of marble, which is no wonder, as a beautiful black ſpecies is found very near. St. Tryphon was a Phrygian, who is ſaid to have ſuffered martyrdom at Nice in 251, at the time of the perſecution under the emperor Decius.

Bex is a ſmall town at the foot of the mountains, five miles from the ſalt-works at Bevieux. Between Bex and Bevieux, I obſerved the larch in great plenty. Painters, from the time of Pliny to that of Raphael, truſted their works to this wood, which the Roman naturaliſt ſtiles *immortale lignum.* The wood is reckoned excellent for all works which are to lie under water; and the borderers on the lake of Geneva prefer it for building their veſſels. In theſe parts I ſaw moſt beautiful woods of cheſnut. Haller ſays that they extend ſome leagues; he alſo informs us, that they are found in other parts of Switzerland, and even in deſert places in ſome of the tranſalpine parts; accident muſt have brought them thither, as it appears from Pliny, that theſe trees were firſt introduced into Europe from Sardis.

Upon our arrival at the ſalt-ſprings, I put on a workman's jacket, and went into the mountain about 3,000 feet, almoſt horizontally. The

gallery is about ſix feet high, and four broad, and is as nicely hollowed as if it had been cut with a chiſſel: it is hewn in a black rock, veined in ſome places with white gypſum. The ſalt is procured from ſome ſprings, which are found within a ſolid rock, perforated at a great expence: the richeſt ſource yields twenty-eight pound of ſalt *per cent.* and the pooreſt but half a pound in the ſame quantity. Near theſe ſprings are ſeveral warm ſources, ſtrongly impregnated with ſulphur; ſome of which contain alſo a mixture of ſalt, and will flame if a lighted candle is put into the pipe through which they flow. No ſolid ſalt, excepting a few ſmall cubes, has been yet diſcovered; but the mountain is replete with particles. Rocks of white gypſum or alabaſter, mixed with bluiſh clay, are common near the ſprings, in the ſame manner as may be obſerved in the pits of Northwich, in Cheſhire.

After travelling in this ſubterraneous paſſage near three quarters of a mile, I obſerved a great wheel of thirty-five feet diameter, which ſerves to raiſe the brine from the depth of about ſeventy feet. From this place is a ſhaft three hundred feet high, which is cut through the mountain to the ſurface, for the purpoſe of introducing freſh air. I noticed two reſervoirs hollowed in the

ſolid

ſolid rock for holding the brine; one whereof was a hundred and ſixty feet ſquare, and nine in depth. Since my firſt expedition to theſe pits in 1776, the workmen had pierced the rock twenty-five feet deeper, and cut a gallery a hundred feet in length. They had alſo began to form a third reſervoir, which is to contain 5,500 cubic feet; and of this nearly half was finiſhed.

The brine depoſited in theſe reſervoirs is conveyed, by means of two thouſand pipes, about a league to Bevieux, where the ſalt is extracted.

The brine pits near Aigle contain only from two to one-half *per cent.*; and yield annually about a third as much as thoſe of Bevieux, or about 5,000 quintals. The ſalt is much whiter and heavier than that of Bevieux, and conſequently bears a higher price.

Theſe ſalt-works, which are the only ones in Switzerland, ſcarcely yield a neat yearly profit of more than £. 3,000; and furniſh only one-twelfth of the annual conſumption in the canton. The remainder is procured chiefly from France, which is obliged by treaty to provide the Swiſs ſtates with this commodity at a moderate price: and indeed ſo high is the tax upon ſalt in that kingdom, that even the French ſalt is ſold two-thirds cheaper in Switzerland, than in many parts of France.

France *. The ordinary price of common ſalt throughout the canton, is at the rate of three-half-pence per pound.

LETTER 44.

Valley and Lake of Joux—Orbe—St. Barthelemi—Yverdun.

Yverdun, Sept. 7.

THE chain of mountains called the *Jura*, begins in the canton of Zuric, extends along the Rhine, into the canton and biſhopric of Baſle, ſtretches into the canton of Soleure and the principality of Neuchatel, branches out towards the Pays de Vaud, ſeparates that country from Franche Comté and Burgundy, and continues beyond the frontiers of the Genevois as far as the Rhone. In various parts of the Pays de

* At Paris, where it is the deareſt, a pound of ſalt is ſold for about 13 ſols, or about ſix-pence of our money: in ſome other parts of France, for inſtance in Franche Comté, a pound coſts only 4 or 5 ſols; but it is furniſhed to the Swiſs at the rate of $2\frac{1}{2}$ ſols.

Vaud

Vaud this chain forms many elevated vallies much viſited by travellers, amongſt which, not the leaſt remarkable, is the valley of the lake of Joux, upon the top of that part of the Jura called Mont Joux; and which lies in the bailliage of Román Motier. This valley contains ſeveral neat and well-peopled villages, and is beautifully checkered with wood, arable, and paſture ground. It is watered by two picturesque lakes; the largeſt of which is called the lake of Joux. One ſhore is high rock, covered with wood; the oppoſite banks form a gentle aſcent, well cultivated and producing grain, backed by an abrupt ridge adorned with pines, beech, and oak. The ſmaller lake, called Lac Brenet, is in its ſhape more oval, and richly bordered with corn-fields and cottages. Theſe two lakes are divided by a narrow neck of land; and over the channel or little ſtreight is a wooden bridge of a ſingle arch, which leads to the village of Charbonniers.

Near the ſmall village of Abbaye, a rivulet guſhes from the bottom of the rock, and loſes itſelf in the largeſt lake. From the ſmaller lake deſcends a ſtream, which is loſt in a hollow gulph called *L'Entonnoir*, or the Funnel, a name common to ſeveral others in this place. In this gulph ſeveral mills are placed, and turned by the force

of the current. About two miles further, on the other ſide of the mountain, the river Orbe burſts forth, and is probably produced by the laſt-mentioned ſtream here ingulphed.

This little vale is very populous, containing about three thouſand inhabitants, who are remarkably induſtrious. Some make watches, but the greateſt part are employed in poliſhing cryſtals, granites, and marcaſites. In the ſmall village of Pont, where we lodged, the greateſt part of the inhabitants bear the ſurname of Rochat; a name which alſo runs through the village of Charboniere, with the exception of only two or three families; and is prevalent likewiſe in that of Abbaye: the whole number of theſe Rochats amounts to above a thouſand. I inquired whether, like the Scottiſh clans, they took the appellation from any chief; or whether they were ſuppoſed to be deſcendants of the ſame family: I was aſſured, that the latter is the fact, and that their anceſtors came originally from France. Theſe parts are much infeſted with bears and wolves.

In our aſcent to this delightful vale, and as we deſcended through a variety of hill, valley, wood, and lawn; we had a moſt extenſive proſpect, comprehending great part of the Pays de Vaud, the

the lake of Geneva with its mountainous boundary, and that of Neuchatel. Theſe two lakes appear, from that high point of view, to be nearly upon the ſame level *, with no conſiderable ſwell of the country intervening.

We paſſed through a beautiful and pictureſque country from Romain Motier to Orbe; which, according to antiquarians, was the moſt antient town, and once the moſt powerful, of all Helvetia. It was called *Urba*, and was the capital of the *Pagus Urbigenus:* no remains however exiſt at preſent of its antient ſplendour. Some antique fortifications, an old caſtle, and a round tower, are works probably of later and more turbulent times; erected, perhaps, when this country was divided into a number of feudal ſovereignties.

I am greatly pleaſed with the romantic ſituation of Orbe, the boldneſs of the ſingle-arched bridge projecting over the Orbe, the wild ſcenery on the banks of that river, its frequent cataracts, and with various pictureſque views in the environs.

Mr. Venel, an eminent ſurgeon of this town, has formed, under the protection of the govern-

* According to Mr. de Luc, the lake of Neuchatel is 159 French feet above that of Geneva.

ment

ment of Berne, an eſtabliſhment which well deſerves the attention of the humane and curious traveller. It is an infirmary for the reception of thoſe objects, who are born with diſtorted limbs, or have by accident acquired that misfortune.

The children are lodged and boarded in the houſe, under the care of his aſſiſtant, who charges himſelf with all the detail of houſekeeping, and of inſtructing thoſe, whoſe age renders it requiſite, that their education ſhould not be neglected.

Mr. Venel's ſkill in improving and ſimplifying thoſe machines neceſſary for his purpoſe, has been ſufficiently atteſted by various cures.

Though he chiefly confines his attempts to infants and children, yet he has performed ſeveral cures on adult perſons. His moſt efficacious remedy is a machine which he has invented to embrace the patient's limbs when in bed, and which is ſo contrived as to act without diſturbing their reſt. Ingenious as his method is, yet he acknowledges, that much of his ſucceſs depends on the mild treatment of the patients, and on having them continually under his inſpection. I was convinced indeed of the mildneſs of his treatment, by obſerving ſeveral of theſe children, from four to ten years of age, crawling about the ground,

ground, and diverting themſelves with great cheerfulneſs, although caſed up in their machinery. It may not perhaps be unworthy of remark, that Mr. Venel, on the admiſſion of a miſerable object, takes in plaiſter of Paris the mold of the diſtorted limbs, in order to demonſtrate the change that takes place. Such an eſtabliſhment redounds highly to the honour of Mr. Venel, and the government who protects it, and is worthy of imitation in all countries.

Orbe, which is governed by its own magiſtrates, is compriſed within the bailliage of Echalens, belonging to Berne and Friburgh: theſe two cantons alternately ſend a bailif, who reſides at Echalens, and remains in office during five years. When Berne appoints the bailif, an appeal lies from his deciſions to the ſovereign council of Friburgh; as it does to the government of Berne, when he is nominated by Friburgh. By theſe means a great check is laid upon the exactions of the bailif: and I am informed, that juſtice is no where more equally adminiſtered than in theſe common bailliages of the two cantons.

Perhaps one of the moſt beautiful and fineſt poſitions in Switzerland is the caſtle of St. Barthelemi, the ſeat of Count d'Aſſry, colonel of the

the Swiſs guards; and now inhabited by his ſon, count Louis d'Affry, to whom I was indebted for a moſt kind and friendly reception. This antient family-ſeat ſtands on an eminence in the bailliage of Echalens, about three miles from Orbe, near the high road which leads from Lauſanne to Yverdun. The ſides of the eminence are feathered with wood; and below are rich fields and meadows of the fineſt verdure, watered by two lively torrents which unite and form the Falun. Upon the high road, the count has reared an obeliſk, on which he has inſcribed, in the true ſpirit of toleration and forbearance, the following words, "*Praiſe God, all ye nations,*" in the Engliſh, Latin, French, and German languages.

The caſtle commands a proſpect of a moſt fertile and well-wooded country, gently broken into hill and dale; on one ſide appears a diſtant view of the Jura and the hills of Burgundy and Franche Comté; and, on the other, the horizon is bounded by the rugged alps in the canton of Berne and in the Vallais, by Mount Velain, the higheſt point of St. Bernard and Mont Blanc, whoſe ſuperior elevation above the ſurrounding heights is ſuch, that its ſummit reflects the rays of the riſing ſun ſeveral minutes ſooner,

and

and retains thoſe of the ſetting ſun ſeveral minutes later than any of the circumjacent mountains.

From St. Barthelemi we deſcended into the plain, which ſtretches to the lake of Yverdun. This plain was formerly covered as far as Entreroches (three leagues from its preſent poſition) and probably further, by that lake: it is now, for a conſiderable part, a great ſwamp. Within a quarter of a mile of the town, are warm baths which are ſtrongly ſulphureous, and much frequented during the ſummer months.

Yverdun is large, airy, and well-built with ſtone, like the towns in the Pays de Vaud: it ſtands near the lake, in a ſmall iſland formed by the two branches of the river Thiele. Between the town and the lake there is a pleaſant lawn extending to the water, and planted with avenues of lime-trees.

Yverdun carries on ſcarcely any trade, and its principal ſupport ariſes from the paſſage of the merchandiſe between Piedmont and Germany. This town is celebrated for its printing-preſs, eſtabliſhed in the beginning of the preſent century; but entirely neglected until, ſome years ago, it was renewed by *Felice*, a Neapolitan of learning and abilities.

The lake of Yverdun, or of Neuchatel, ſtretches from ſouth to north about twenty miles in length, and in ſome places about five in breadth. Its ſhores near Yverdun are covered with country-houſes.

It is ſomewhat extraordinary, that the dull and taſteleſs uniformity of the French gardens ſhould have been adopted by the Swiſs, whoſe country abounds with noble and pictureſque ſituations, and where nature wantons in the moſt luxuriant variety. I have frequently obſerved, in the midſt of theſe romantic ſcenes, a majeſtic foreſt ſliced into regular alleys; and at the very borders of the fine lakes, artificial pools of water edged with ſun-burnt parterres.

If any perſon ſhould, in this inſtance, accuſe me of national prejudice, let me exclaim with Voltaire, who certainly cannot be convicted of partiality to the Engliſh:

Jardins plantés en ſymmêtrie,
Arbres nains tirés au cordeau,
Celui qui vous mit au niveau
En vain s'applaudit, ſe récrie;
En voyant ce petit morceau,
Jardins il faut que je vous fuie,
Trop d'art me revolte et m'ennuie:
J'aime mieux ces vaſtes forêts

La

La nature libre et hardie
Irreguliere dans ſes traits
S'accorde avec ma faintaiſie.

I am, &c.

LETTER 45.

Granſon—Neuchatel—Mr. Pury's Benefactions.

WE ſkirted the weſt ſide of the lake of Neuchatel through Granſon, the principal town of a bailliage of that name, belonging to Berne and Friburgh, and remarkable for the battle in which Charles the Bold, duke of Burgundy, was defeated by the Swiſs in 1476. We entered the principality of Neuchatel about ſix miles from that town, and paſſed through St. Aubin, Boudri, Colombier, lying pleaſantly upon the borders of the water. The road runs along the ſide of the Jura, through a country that reſembled, in ſome meaſure, the diſtrict of La Vaux, between Lauſanne and Vevay: the ſides of the Jura are almoſt the whole way covered with vines, ſupported in many parts by

low ſtone walls. The borders of this lake are more uniform than thoſe of the lake of Geneva; and do not riſe into ſuch high, irregular, and groteſque alps as the coaſt of Chablais. Towards Granſon and St. Aubin, the country is more diverſified with meadows and corn-fields; nearer to Neuchatel, the ſummits of the mountains are clothed with foreſt, and the midland and lower parts entirely planted with vines.

Between the lake and the Jura ſeveral rivers burſt from the rock in conſiderable ſtreams; and, after turning ſeveral mills, fall into the lake at a little diſtance from their ſource. The largeſt is that of La Serriere, near a ſmall village of the ſame name, which we croſſed in our way to Colombier, where we dined with a family whoſe acquaintance we had formed at the baths of Leuk. We paſſed a very agreeable day with theſe amiable perſons; by whom we were received with that frankneſs and unaffected eaſe which characteriſes true politeneſs.

After dinner ſome muſicians of the country performed the *Renz des vaches:* that famous air which was forbidden to be played among the Swiſs troops in the French ſervice; as it awakened in the ſoldiers ſuch a longing recollection of their native country, that it often produced in them

them a ſettled melancholy, and occaſioned frequent deſertion. The French call this ſpecies of patriotic regret, *la maladie du pays*. There is nothing peculiarly ſtriking in the tune; but, as it is compoſed of the moſt ſimple notes, the powerful effect of its melody upon the Swiſs ſoldiers, in a foreign land, is the leſs ſurpriſing. Nothing indeed revives ſo lively a remembrance of former ſcenes, as a piece of favourite muſic which we were accuſtomed to hear amid our earlieſt and deareſt connections: upon ſuch an occaſion, a long train of aſſociated ideas will neceſſarily ariſe in the mind, and, if not totally ſelfiſh, melt it into tenderneſs. To uſe the language of poetry,

> *There is in ſouls a ſympathy with ſounds.*
> *Wherever I have heard*
> *A kindred melody, the ſcene recurs,*
> *And with it all its pleaſures and its pains* *.

It is obſervable, that thoſe who inhabit mountainous countries are moſt ſubject to this *maladie du pays*, becauſe their habits of life are eſſentially different from the cuſtoms and manners of other parts. Accordingly, the Scotch highlanders, and the Biſcayans, as well as the Swiſs, when abſent from their country, are peculiarly apt to

* Cowper's Taſk, book vi.

be affected with every circumſtance that recalls it to their minds.

The town of Neuchatel is ſmall, and contains about 3,000 ſouls. It lies partly upon the little plain between the lake and the Jura, and partly upon the declivity of that mountain: in conſequence of which ſituation, ſome of its ſtreets are very ſteep. At the commencement of the preſent century, commerce was almoſt wholly unknown in this town; as the ridiculous pride of its being deemed degrading, generally prevailed among the inhabitants. This ſenſeleſs prejudice is now, however, nearly extinguiſhed. The chief article of exportation is wine, produced from the neighbouring vineyards, and much eſteemed. Manufactures alſo of printed linens and cottons have been eſtabliſhed with ſucceſs: and within theſe few years, ſeveral merchants have raiſed large fortunes.

POSTSCRIPT.

Oct. 3, 1786.

The mildneſs of the government, and the general well-being of the inhabitants, are viſibly demonſtrated from the increaſe of population among the natives, and the prodigious influx of ſettlers. The number of ſouls in the principality

of

of Neuchatel and Vallengin being, in 1752, only 28,017 ſubjects, and 4,318 aliens, amounted, in 1784, to 31,576 ſubjects, and 9,704 aliens, which gives an increaſe of near a fourth part within the ſpace of thirty-two years.

The facility of acquiring the burgherſhip of Neuchatel, has alſo prevented any decreaſe of its inhabitants. Thus the magiſtrates, between the years 1760 and 1770, admitted forty-one burghers; from 1770 to 1780, forty-ſix; from 1780 to 1785, fifty-one; in all, a hundred and thirty-eight. Many of theſe ſettlers had children before they purchaſed the burgherſhip; and thirty-eight were foreigners, either German, French, or Swiſs.

Several public works and buildings have been lately executed at Neuchatel, at an expence far exceeding the revenues, or even wants of this little ſtate. Amongſt others I ſhall mention a ſuperb cauſeway leading towards the valley of St. Imier, and a town-houſe, which is built of ſuch ſolid materials, as if it was intended to ſurvive to the moſt diſtant poſterity, and to rival the duration of the much-famed Roman capitol *.

The perſon, to whom the burghers of Neu-

* *Capitoli* IMMOBILE *ſaxum.* Virgil.

chatel principally owe the embelliſhment of their town, is Mr. David Pury, late banker of the court at Liſbon. He was a citizen of Neuchatel, and was born in 1709: his father was mayor of Lignieres, afterwards colonel and juſtice of peace in South Carolina, and founder of Puriſburgh. Having received his education in his native town, he quitted it, as ſome ſay, in great poverty, and repaired to Geneva, where he paſſed his apprenticeſhip, but in what houſe, or in what trade, the perſon, who obligingly furniſhed me with theſe anecdotes, does not mention. From Geneva he went to London, and acted as one of the clerks to an eminent jeweller, where he acquired a great ſkill for eſtimating at ſight the value of diamonds. After a long reſidence in England, he eſtabliſhed himſelf in Liſbon, and carried on a very extenſive commerce, particularly in brazil-wood and precious ſtones. Being appointed court-banker, he rapidly increaſed his fortune. This generous man, however, did not, with a parſimony not unuſual in perſons who have enriched themſelves by commerce, conſign his money to his coffers, or ſparingly diſtribute his largeſſes; on the contrary, while living, he remitted large ſums of money to his native town; and being unmarried, and having none but diſ-

tant

tant relations, left his country his heir. The following is a list of the sums which he gave away, either in charitable donations, or for the improvement of Neuchatel.

From the year 1771 to 1786, £. 100 annually for the poor of Neuchatel, and the same sum for those of Vallengin, which, for fifteen years, amounts to £. 3,000. Different sums at various periods, and for divers uses, to January 1785, amounting to £. 15,900. To this must be added the purchase of near 7,000 tickets in the lottery towards raising a fund for building and endowing an hospital; which tickets he also presented to the said hospital. He died on the 31st of May 1785; and the remains of his fortune, bequeathed to his country, after the payment of a few legacies, does not fall short of £. 160,000, which, together with the contributions in his life-time, render his benefactions equal to almost £. 200,000.

His grateful country obtained from the king of Prussia the title of baron in his favour; a title which, through his singular modesty, he neither bore nor used in the signature of his letters. The citizens of Neuchatel have also placed the portrait of this generous benefactor in one of the apartments in which government assemble; and have

have ordered a marble buſt to be executed for the new town-houſe.

The large legacy which Pury has bequeathed to the town, being more than ſufficient to complete the buildings and public works, it would well become the wiſdom of government to employ part of the remainder, rather in uſeful undertakings, than in the conſtruction of new edifices, which are not wanted. With reſpect to thoſe works, which regard the health and convenience of the town, it may be ſufficient to hint, that the public walks, which are now much neglected, might be improved; the ſtreets, which are extremely dirty, be cleanſed; and the torrent, which traverſes the town and threatens it with frequent inundations, may be turned. But particularly a large field is open for the protection and encouragement of literature; for even in the eſſential article of education this place is ſo deficient, that it can ſcarcely be ſaid to poſſeſs a ſingle ſeminary; conſequently the inhabitants, though endowed with lively parts and good capacities, are yet much leſs informed than thoſe of the other Proteſtant towns in Switzerland. A new ſpirit may be given to the ſtudy of the arts and ſciences; and the ſeminary may be rendered of great public utility by appointing two or three

three profeſſors for the inſtruction of youth. Thus future generations, enlightened by means of this benefaction, will repeat with ſatisfaction the name of Pury; joining in their grateful commemorations thoſe magiſtrates, who firſt opened the ſources of ſcience and literature, and taught them to flow for the improvement of a diſtant poſterity.

LETTER 46.

Expedition to Locle and Chaux de Fond.

Neuchatel, Sept. 11.

I AM charmed with an expedition to the ſummit of the Jura; and will give you a ſhort account of it, while the impreſſion remains warm upon my mind.

The principality of Neuchatel and Vallengin, ſtretches from the lake to the limits of Franche Comté; containing in length, from north to ſouth, about twelve leagues, and about ſix in its greateſt breadth. The diſtrict of Neuchatel occupies all the plain, together with the lower parts

of the mountains: while Vallengin is totally encloſed within the Jura. Parallel chains of the Jura run from eaſt to weſt, and form, in the moſt elevated parts, ſeveral valleys. The lower grounds of this chain are arable lands and vineyards: the higher conſiſt of large tracts of foreſt, which in many parts have been cleared, and converted into conſiderable paſtures, intermixed with ſome fields of barley and oats. But the ſingular genius and induſtry of the numerous inhabitants, particularly demands the attention of every curious traveller.

We paſſed through *Vallengin*, the capital of the diſtrict of that name; a ſmall open burgh, with a modern caſtle built on ſome antient ruins. We then croſſed the *Val de Ruz*, which contains above twenty villages, ſituated at the foot of the mountains which border the valley: the inhabitants in general are employed in agriculture, ſome few excepted, who follow occaſionally the mechanical arts.

We arrived about mid-day at La Chaux de Fond, a large handſome village lying in a broad valley which reaches to Franche Comté: from thence we proceeded to Locle, through a continued range of pleaſing cottages, which ſkirt both ſides of the road; and are ſcattered likewiſe over the country. As theſe two little towns or

villages

villages carry on the ſame commerce; I ſhall comprehend them both under one common deſcription.

La Chaux de Fond and Locle, together with the diſtricts belonging to them, may contain about ſix thouſand inhabitants, remarkably diſtinguiſhed for their genius, induſtry, and ſkill in the mechanical arts. They carry on an extenſive commerce in lace, ſtockings, cutlery, and other merchandiſe of their own manufacture: but watch-making, and every branch of clock-work, are the articles in which they particularly excel. They not only make every utenſil employed in thoſe arts, but have invented ſeveral: and all ſorts of workmen neceſſary for the completion of that branch of buſineſs, ſuch as painters, enamellers, engravers, and gilders, are found in theſe villages; where, upon an average, about forty thouſand watches are yearly made. The genius and induſtry, indeed, obſervable upon theſe mountains, exhibit a ſcene uncommonly pleaſing. As every individual is ſure, not only of obtaining a comfortable maintenance for himſelf, but alſo of ſoon placing his children in a way of procuring their own livelihood; the people marry very early.

Not many years ago, the greateſt part of theſe valleys was almoſt one continued foreſt; but the wonder-

wonder-working powers of induſtry have happily changed the ſcene into flouriſhing villages and fertile paſtures. The increaſe of population will appear from the following fact: Formerly the produce of the country was more than ſufficient for the conſumption of the inhabitants; at preſent, although, conſiderably more cultivated, it ſcarcely furniſhes an eighth part of the proviſions neceſſary for interior conſumption: the remainder is drawn from Franche Comté. And no wonder; for beſide the natural effect of their frequent and early marriages; every ſtranger, who brings a certificate of his good behaviour, is at liberty to ſettle, and to follow any trade without the leaſt reſtriction. Here, no apprenticeſhip is neceſſary; nothing is contraband; and induſtry exerts herſelf untaxed.

Beſide thoſe particular arts I have already mentioned, ſeveral inhabitants of Locle and La Chaux de Fond are well ſkilled in other branches of mechanical ſcience, and have invented uſeful mathematical and aſtronomical inſtruments. Among thoſe who have eminently diſtinguiſhed themſelves in this way, is the famous Jaquet Droz, who is now at Paris; and whoſe ſon exhibited in England ſeveral automatical figures of a very ſingular and ſurpriſing conſtruction: one played upon the harpſichord; another drew landſcapes;

ſcapes; and, what is ſtill more extraordinary, a third copied any word preſented to it, or wrote down whatever was dictated by any of the company. Theſe are certainly wonderful inventions, and ſeem to exalt the powers of mechaniſm; but ſtill they are mere toys, and an unworthy waſte of great genius: it is Swift making riddles. How much more laudably, and with equal ſucceſs, might the ſame talents and application have been exerted in improving, or adding to, thoſe inſtruments and apparatus, which are neceſſary to the aſtronomer and natural philoſopher!

The origin of watch-making in theſe parts, as related by Mr. Oſterwald, the hiſtoriographer of theſe mountains, is extremely curious; and the truth of his account was confirmed to me by ſeveral artiſts both of Locle and La Chaux de Fond. In 1679, one of the inhabitants brought from London a watch; which being out of order, he entruſted it to Daniel John Richard, of La Sagne. Richard, after examining the mechaniſm with great attention, determined to attempt making a watch from the model before him: but to this end he was deſtitute of every other aſſiſtance than the powers of his own native genius. Accordingly he employed a whole year in inventing and finiſhing the ſeveral inſtruments previouſly neceſſary for his purpoſe; and in ſix months

months from that period (by the ſole force of his own penetrating and perſevering talents) he produced a complete watch. But his ambition and induſtry did not ſtop here: beſide applying himſelf ſucceſsfully to the invention of ſeveral new inſtruments uſeful for the perfection of his work, he took a journey to Geneva, where he gained conſiderable information in the art. He continued for ſome time the only watchmaker in theſe parts; but buſineſs increaſing, he inſtructed ſeveral aſſociates; by whoſe aſſiſtance he was enabled to ſupply from his ſingle ſhop all the demands of the neighbouring country. Towards the beginning of the preſent century he removed to Locle, where he died in 1741, leaving five ſons, who followed their father's occupation. The knowledge and practice of the art gradually ſpread itſelf, is now become almoſt the univerſal buſineſs of the inhabitants, and may be deemed the principal cauſe of the population obſervable in theſe mountains.

The inventive genius of this mechanical people is not merely obſervable in the above-mentioned articles, but diſcovers itſelf upon all occaſions where it can be applied to the purpoſes of their convenience and accommodations. To give an inſtance: the rocks in moſt parts of the alps being exceedingly hard and ſolid, the waters

uſually

uſually make their way along their ſides, and ruſh down in perpetual torrents: but the ſtrata which compoſe the Jura being leſs firm and compact; the rains and melted ſnow penetrating into the crevices, form ſubterraneous channels, and iſſue in rivulets at the bottom of the mountains. Now the peaſants, in order to avail themſelves of this peculiarity, have, in the midſt of theſe ſubterraneous channels, and with much labour, erected mills, which are turned by the deſcending torrents. For this purpoſe the builders have conſtructed wheels in places where it ſeemed ſcarcely practicable: have invented new modes of ſcaffolding, and a great variety of other ingenious contrivances in order to facilitate their work.

The natives of theſe diſtricts are exceedingly courteous to ſtrangers who viſit their country. They are in general very well informed in ſeveral branches of knowledge; and, as they uſually employ their leiſure hours in reading, many of the villages contain circulating libraries.

The houſes are plaiſtered and whitewaſhed; though ſmall, are commodious and well-built; and furniſhed with a degree of neatneſs, and even elegance, peculiarly ſtriking in theſe ſequeſtered mountains.

The rock which forms the baſe of the Jura, is moſtly compoſed of calcareous ſtone; and perhaps there is no ſpot in Europe where are found ſo large a quantity of petrified ſhells and marine plants in ſo ſmall a ſpace. Near Locle I obſerved a ridge of hills, that ſeemed to conſiſt entirely of *pierres arboriſées*, or ſtones bearing the impreſſion of plants.

In returning, we had a moſt ſublime proſpect of the lakes of Neuchatel, Bienne, and Morat, with the high and rugged chain of alps ſtretching from the cantons of Berne and Friburgh, as far as the Vallais, and the mountains of Chablais.

Such perfect eaſe and plenty reigns throughout theſe mountains, that I ſcarcely ſaw one object of poverty: the natural effects of induſtry under a mild and equitable government. It is of theſe vallies, and of their inhabitants, that Rouſſeau gives ſo enchanting a deſcription in his letter to D'Alembert.

I am, &c.

LETTER

LETTER 47.

Government of Neuchatel.

BY the death of the ducheſs of Nemours, in 1707, the ſovereignty of Neuchatel and Vallengin became vacant; and being claimed by Frederic the Firſt, king of Pruſſia, as heir to the prince of Orange, his right was acknowledged by the ſtates of the country. Upon his death it deſcended to his ſon Frederic William, who tranſmitted it with his other dominions to Frederic the Second.

The conſtitution of Neuchatel is a limited monarchy. The machine of this government is indeed actuated by ſuch nice ſprings, and its wheels are ſo exceedingly complicated, that it is very difficult for a ſtranger to diſtinguiſh, with any degree of accuracy, the prerogatives of the ſovereign, and the franchiſes of the people: particularly as ſome, even of their moſt important privileges, depend upon mutual acquieſcence and immemorial cuſtom, and not upon written laws. I ſhall endeavour, however, to trace the principal features of this government; the reſult of

my beſt inquiries during my continuance at Neuchatel.

Upon the acceſſion of Frederic the Firſt, certain general articles, which in a great meaſure eſtabliſhed the prerogatives of the prince, and the liberties of the ſubject, were ſigned and ratified by the king. Beſide theſe general articles, which his preſent majeſty upon his acceſſion promiſed to preſerve inviolate; others were added at the pacification of 1768, which finiſhed the diſpute between the ſovereign and ſubject. By this pacification, the king not only renewed his aſſent to the *general* articles; but alſo explained them, wherever their tenor had been miſtaken; expreſsly confirming alſo ſeveral other privileges in favour of the people, which had hitherto been equivocal, or not duly obſerved.

The moſt important of theſe general articles are:

1. The ſovereign promiſes to maintain the Reformed religion as by law eſtabliſhed; and to tolerate no other ſect, except within the diſtricts of Landeron and Creſſier, where the catholic religion is dominant.

2. No perſon but a native of the country is capable of holding any civil or military charge, excepting that of governor, who may be a foreigner; and the ſame incapacity is extended even

to

to natives, who are in the ſervice of a foreign prince.

3. All the ſubjects have a right to enter into the ſervice of a foreign power; provided that power is not in actual war againſt the prince, as ſovereign of Neuchatel: and if the ſovereign ſhould be engaged in hoſtilities, which do not concern Neuchatel, that ſtate may continue neuter, except the Helvetic body ſhould be involved in the conteſt *.

* The latter clauſe of this article is not ſo clearly worded as it might have been; from a delicacy, I ſuppoſe, of not expreſsly ſtipulating, that the ſtate of Neuchatel and Vallengin may oppoſe their ſovereign by arms, in caſe the Swiſs ſhould be engaged in any war againſt him. It is evident, however, that they conſider their connection with the Helvetic body, as of ſuperior obligation to that with their prince, as ſovereign of Neuchatel and Vallengin.

The remarkable clauſe in queſtion is as follows:

Et qu'en outre et conformément à des articles exprés et formels des franchiſes tant de la bourgeoiſie de Neufchâtel que de celle de Vallengin, cet Etat ne puiſſe être engagé dans aucune guerre, ni les ſujets d'icelui obligés d'y marcher, que ce ne ſoit pour la propre guerre du Prince, c'eſt à dire, pour la defence de l'Etat, et pour les guerres que le Prince pourroit avoir en tant que ſouverain de Neufchatel et non autrement: en ſorte que s'il avoit guerre pour raiſon de quelque autre Etat, terres et ſeigneuries, l'Etat de Neufchâtel ne ſoit point obligé d'y entrer; mais en ce cas devra demeurer dans la neutralité, à moins que tout le corps Helvetique en général n'y prit part et intérêt.

4. Juſtice ſhall be equitably adminiſtered; and, for this purpoſe, the three eſtates of Neuchatel and Vallengin ſhall be annually aſſembled.

5. The magiſtrates and officers of juſtice, inſtead of holding their employments during pleaſure, ſhall enjoy them during their good behaviour. And, by the late pacification it was further agreed, that the prince is not himſelf the judge of their good behaviour; but that in order to be deprived of their places, they muſt be fully convicted of malverſation in office, by certain judges at Neuchatel appointed for that purpoſe.

6. The ſovereign ſhall take the accuſtomed oath upon his acceſſion; and promiſe to maintain all the rights, liberties, franchiſes, and cuſtoms, written or unwritten.

It is remarkable, that one of the moſt eſſential rights of the ſubject, depends upon immemorial uſage; for, that "the ſovereign ſhall be conſidered as reſident only at Neuchatel," is in the number of their unwritten immunities. Now this privilege, in conjunction with the third article juſt cited, forms the baſis of their civil liberty. By the former, the prince, when abſent, can only addreſs his ſubjects through his governor and the council of ſtate; and no ſubject can be

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tried out of the country, or otherwiſe than by judges appointed by the conſtitution: by the latter, ſhould the king of Pruſſia be at war with all Germany; the people of Neuchatel and Vallengin are by no means obliged to arm in his defence; but individuals may even ſerve againſt him, ſo long as the powers whom they ſerve, are not engaged in hoſtilities againſt their country *.

Beſide theſe general articles, that comprehend the privileges of the people at large; there are others which the ſovereign is equally bound to maintain, relating to the town of Neuchatel and the diſtrict of Vallengin, in particular.

The prince confers nobility, nominates to the principal offices of ſtate, both civil and military, and appoints the chatelains and mayors, who preſide in the courts of juſtice. His revenues, which are very moderate, and ſcarcely amount to £. 5,000 a year, ariſe from certain demeſnes; from a ſmall land tax; from the tythes of wine and corn; and from the tenth of the value on the ſale of immoveables. With regard to commerce,

* When Henry duke of Longueville, and ſovereign of Neuchatel, was, in 1650, ſent to the caſtle of Vincennes, Felix de Mareval, captain of the Swiſs guards, kept guard in his turn, though he was citizen of Neuchatel, at the door of the priſon, in which *his ſovereign* was confined.

no ſubject pays any duties either of importation or exportation, except for foreign wines imported into the town of Neuchatel.

During the abſence of the prince, he is repreſented by a governor of his own appointing; who enjoys conſiderable honours, but is extremely limited in his authority. He convokes the three eſtates, preſides in that aſſembly, and has the caſting vote if the ſuffrages happen to be equal: he enjoys the power alſo, in criminal caſes, of pardoning, or of mitigating the ſentence. In the governor's abſence his place is ſupplied by the ſenior counſellor of ſtate.

The three eſtates of Neuchatel, form the ſuperior tribunal of this country, and receive appeals from the inferior courts of juſtice. They are compoſed of twelve judges, divided into three eſtates: the firſt conſiſts of the four ſenior counſellors of ſtate, who are noble; the ſecond, of the four chatelains of Landeron, Boudry, Val de Travers, and Thielle*; and in caſe of abſence, their place is ſupplied by the reſpective mayors in the principality of Neuchatel, ac-

* The principality of Neuchatel is divided into a certain number of diſtricts; ſome of which are denominated *chatellaines*, and others *mayoralties*. The chiefs of the former are called *chatelains*, and of the latter *mayors*: in every other reſpect their office and their power is the ſame.

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cording to a regulated order; the third is compoſed of four counſellors of the town of Neuchatel. The judges in the firſt and ſecond diviſion hold their places for life; thoſe in the third are appointed annually. This body ordinarily aſſembles every year in the month of May; but is convoked extraordinarily upon particular occaſions: the town of Neuchatel is always the place of meeting.

Theſe three eſtates are not the repreſentatives of the people; nor do they poſſeſs the legiſlative authority. They are, properly ſpeaking, the ſupreme court of judicature, which receives all appeals, and decides finally all cauſes, even thoſe relating to the ſovereignty of the country: a power which they exerciſed in the year 1707, upon the extinction of the direct line in the perſon of the ducheſs of Nemours.

It may be here not unworthy of remark, that the three eſtates decided the famous cauſe of the ſucceſſion in 1707, as a proceſs between the ſeveral claimants of the ſovereignty. But if (in failure of claimants) a new ſovereign was to be choſen, or a new form of government to be eſtabliſhed; this would no longer be conſidered as amenable to a court of judicature: the queſtion would then come before the people aſſembled by means of their repreſentatives.

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The council of ſtate is inveſted with the ordinary adminiſtration of government, ſuperintends the general police, and is entruſted with the execution of the laws. The members nominated by the ſovereign are not limited to any particular number. The prince exerciſes his authority by means of this council, in which he is always conſidered as perſonally preſiding: and the power of the preſident is only to convoke the aſſembly, to propoſe the ſubject of their conſideration, to collect the votes, and to decide when the voices are equal. The ordinances of this council are previouſly communicated to the *miniſtraux* of Neuchatel, who are to certify, that they contain nothing contrary to law.

The town of Neuchatel enjoys very conſiderable privileges: it has the care of the police within its own diſtrict, and is governed by its own magiſtracy, conſiſting of a Great and Little Council. I will not trouble you with a detail of the ſeveral departments; but I cannot omit mentioning the *miniſtraux*; becauſe the members of that body form the third eſtate on every act of legiſlation. The *miniſtraux* are a kind of committee from the council of the town, and are entruſted with the adminiſtration of the police. They conſiſt of the two preſidents of that council, four maſter-burghers drawn from the Little Council,

Council, and the *banneret* or guardian of the people's liberties. The ſix former are changed every two years; the banneret is choſen by the general aſſembly of the citizens, and continues in office during ſix years.

The legiſlative authority is divided in ſo complicated a manner, that it would be no eaſy taſk to determine preciſely where it abſolutely reſides: perhaps the following account of the perſons concerned, and of the forms obſerved, in enacting and promulgating laws, may ſomewhat aſſiſt in clearing the difficulty.

As ſoon as the cauſes are decided by the three eſtates aſſembled in the month of May; the four judges, who form the third eſtate, retire; and their place is ſupplied by the four *miniſtraux*. The attorney-general then deſires the members of the three eſtates to take into conſideration, whether it is neceſſary to frame any new laws. If a new ordinance is propoſed; a declaration is drawn up, and delivered to the council of ſtate for their deliberation, whether it is contrary to the prerogatives of the prince, or to the rights of the ſubject: from thence it is communicated to the council of the town, in order to be examined, whether it infringes the privileges of the citizens. If adopted by the council of ſtate, and the council of the town, it is propoſed to the prince for his approbation

approbation or rejection: in the former caſe, it is again publicly read before the three eſtates; and the governor, or preſident, declares the approbation of the ſovereign. It is then promulgated, or, as the expreſſion is, paſſed into a law by the three eſtates.

Since the acceſſion of the houſe of Brandenburgh, the people of Vallengin are always conſulted upon the framing of a new law. For this purpoſe the three maſter-burghers of Vallengin examine, whether it contains any thing inconſiſtent with the franchiſes of that diſtrict; in which caſe they have the power of remonſtrating to the governor in council.

From this detail it ſhould ſeem, that the legiſlative authority reſides conjunctively in the prince, the council of ſtate, and the town; that the people of Vallengin have a kind of negative voice; and that the three eſtates propoſe and promulgate the laws.

Every year, at the concluſion of the aſſembly of the three eſtates of Neuchatel, thoſe of Vallengin, as conſtituting the ſupreme court of judicature for that country, meet at Vallengin, and decide finally all appeals from the inferior courts of juſtice. The *firſt* of theſe three eſtates is formed by the ſame four noble and ſenior counſellors of ſtate, who ſit in the firſt of the three

eſtates

eſtates of Neuchatel; the *ſecond* by four mayors of the county of Vallengin; and the *third* by four members of the court of juſtice of Vallengin, nominated by the mayor of Vallengin. The governor, or, in his abſence, the ſenior counſellor, preſides, as in thoſe of Neuchatel. The three eſtates of Vallengin have no interference in any act of legiſlation: the laws which have been framed or amended at Neuchatel, in the manner abovementioned, being ſimply remitted to them by the ſolicitor-general, and publicly read before them.

The people of Vallengin aſſemble every three years in an open plain, in order to elect their three *maſter-burghers*, who are reſpectively choſen from the inhabitants of the burgh of Vallengin, of the Val de Ruz, and of the mountains. The function of theſe maſter-burghers is to watch over the general intereſts of the people: they are alſo in ſome caſes deputed to Neuchatel by the people, whenever they are ſummoned by the governor and council of ſtate, in relation to any affair which particularly concerns their county.

The principality of Neuchatel and Vallengin is divided into a certain number of diſtricts, each of which has its criminal court of juſtice. The great circumſpection obſerved in the judicial proceedings,

proceedings, may ſometimes favour the eſcape of the criminal: but the few inſtances of atrocious crimes, prove that this humane caution is no encouragement to tranſgreſſors; and is a ſtrong preſumption of the general good morals which prevail among the people. In a word, perſonal liberty is almoſt as tenderly and as ſecurely protected by the laws of this country, as by thoſe of our own invaluable conſtitution.

When the criminal is arreſted, he is immediately brought to trial: after which, the ſentence is read to him in priſon. The next morning he again appears before the judges, aſſembled in the *open air*; the former proceedings on the trial are read; and the judges once more deliver their opinion. In capital ſentences, the governor is inſtantly acquainted with the circumſtances of the crime; and if he does not remit or ſoften the puniſhment, the ſentence is immediately executed. I am concerned to add, that *torture* (though ſeldom uſed) is not abſolutely aboliſhed.

Such are the general outlines of this remarkable conſtitution, by which the liberties of the people are as well, and perhaps better, ſecured than even in the democratical cantons; for, al-

though the moſt deſpotic prince in Germany is ſovereign, his power is exceedingly limited. Among the ſtriking circumſtances which characteriſe this government, muſt be mentioned the very liberal encouragement given to ſtrangers, who ſettle in the country. They enjoy every poſſible privilege of trade and commerce; and in no ſtate are fewer eſſential diſtinctions made between ſtrangers and natives. I have already obſerved to you, the good effects of this enlarged policy on the population of Neuchatel and Vallengin: whereas a narrower and more contracted principle in ſome of the neighbouring Swiſs cantons, has occaſioned, and continues to occaſion, a very manifeſt decreaſe of inhabitants.

LETTER

LETTER 48.

Route from Pontarlier to Neuchatel—Valley of Travers—Anecdotes of Rouſſeau—Iſle of St. Peter, in the Lake of Bienne.

Neuchatel, October 1785.

I Now write to you a ſecond time from Neuchatel, at the interval of nine years ſince the date of my former letters. On the preceding occaſion I went from Granſon to Neuchatel; to-day I came from Pontarlier, a ſmall town in Burgundy, which is the uſual route of thoſe who enter Switzerland on this ſide.

From Pontarlier I aſcended gently by the ſide of the Dou, here a ſmall rivulet bubbling in the vale, quitted that ſtream, and paſſed under a bold rock, on which ſtands the caſtle of Joux forming a picturesque landſcape. This caſtle has a garriſon of invalids, and commands the narrow valley leading into Burgundy. Near it the road is divided into two branches; one leads directly to Joigne, and the other to Neuchatel. In about two hours we obſerved a ſtone, which ſeparates France from the county of Neuchatel.

Soon

Soon afterwards we mounted an eminence, looked down upon the beautiful valley of Travers, deſcended to a narrow paſs, which is guarded by a chain faſtened to the rock, bearing the date of 1722. Hiſtory, however, makes mention of this paſs, and of a ſimilar chain, at a much earlier period; particularly in 1476, when Charles the Bold, having ineffectually attempted to force it, marched with his army to Joigne, and beſieged Granſon, where he was defeated.

Having deſcended to St. Sulpice, I viſited the ſource of the Reus, which iſſues at the foot of a rock in five copious ſprings, that form a large body of water, and turn ſeveral mills. I was accompanied to this picturesque ſpot by an inhabitant of Fleurier, a neighbouring village: ſpeaking of the increaſe of induſtry in theſe parts, he informed me, that about thirty years ago Fleurier contained only three watchmaker, whereas at preſent above a hundred were ſettled in that place. He added, that notwithſtanding the conſtant influx of ſtrangers, hands were ſtill wanting for the numerous trades, which are carried on with great ſucceſs in theſe parts.

I continued along the high road leading to Neuchate, through the beautiful and romantic valley of Travers, watered by the Reus, abound-

ing in the moſt fertile paſtures, bordered by hills gently riſing from the banks of the river, and beautifully ſprinkled with wood. I travelled through many neat villages, particularly Bouvereſſe, Couvet, Travers which gives its name to the whole valley; and Noirague, where I quitted the valley, and entered a narrow paſs called *Cluſette*. From hence the road traverſes an abrupt and woody country along the ſides of precipices, the Reus rolling beneath in a deep channel. At the ſmall village of Brot, a pleaſing view of the lake of Neuchatel and the adjacent country opened gradually, as I deſcended, and joined the road leading from Granſon to Neuchatel.

I did not quit the valley of Travers without paying a viſit to Moitier Travers, rendered memorable by the reſidence of Rouſſeau, who being, in 1762, driven firſt from Geneva, afterwards from Yverdun by the government of Berne, found a refuge from civil and theological perſecution in this ſecluded valley, under the protection of Lord Keith, governor of Neuchatel. The dwelling-houſe of this ſingular man, is a ſmall wooden building at the further extremity of the village, near the road which leads to Fleurier, and is now occupied by Mr. Martinet, mayor of the valley, a ſenſible old gentleman,

who

who lived in habits of great intimacy with the philoſopher of Geneva.

The room chiefly occupied by Rouſſeau, is a ſmall bed-chamber, which, out of reſpect to his memory, is left in the ſame ſtate as when he lived there. In a corner near the window, he had made a kind of receſs formed by two book-caſes, and a ſimple deal plank which reached from one book-caſe to the other, and on which he was accuſtomed to write. Rouſſeau admitted company into this room; but into the receſs he ſuffered no one to enter, from a ſuſpicion, that they would overlook his papers when he was writing. He uſed alſo to frequent a ſmall open gallery in the front of the houſe, the extremities whereof he had encloſed with planks, in which were peep-holes for the purpoſe of reconnoitring thoſe perſons who came to viſit him, that he might give his orders whether they ſhould be admitted or refuſed. Here he walked and read.

During his reſidence at Moitier, from 1762 to 1765, by frequently ſauntering into the fields and neighbouring mountains, he acquired a taſte for the ſtudy of botany, which he never intermitted, and which he always ſtyled his peculiar delight. During this period of his life, he iſſued from this ſecluded corner his *Lettre à l'Archevêque*

vêque de Paris, his *Lettres Ecrites de la Montagne*, and ſome other works; in which he diſplays thoſe wonderful powers of invention and deſcription, that faſcinating yet declamatory eloquence, that glow and animation of ſtyle, that fondneſs for paradoxes, that reverence for the ſcriptures and yet thoſe perverſe doubts of their authenticity, thoſe liberal yet levelling principles of government, that keenneſs of irony, and that motley mixture of ſophiſtry and argument, which checker and characteriſe all his writings.

Rouſſeau, on his arrival at Moitier, appeared in a common dreſs, but ſoon afterwards aſſumed an Armenian habit; either, as he himſelf alleged, becauſe that mode of clothing was adapted to the diſorder with which he was afflicted; or from that affectation of ſingularity, which ſeems to have marked his character, in every period of his life. Through Lord Keith's interceſſion, the king of Pruſſia offered to Rouſſeau a penſion of £. 100 per annum, which he declined, from his averſion to the leaſt ſhadow of dependence; preferring to copy muſic for his livelihood, rather than to accept an obligation even from ſo great a ſovereign; and he uſed to boaſt, that he could daily earn a guinea by that occupation.

Rouſſeau took his repaſt uſually alone; though he would ſometimes, but very rarely, accept

cept an invitation from M. Martinet to dinner or ſupper; and particularly when Lord Keith paſſed a week at Moitier Travers for the purpoſe of viſiting him. On theſe occaſions he was remarkably agreeable and lively; being naturally of a ſocial diſpoſition, he converſed with great ſpirit and animation, and yet with as much correctneſs, as if he was dictating for the preſs.

Rouſſeau ſeems to have truſted entirely to his own judgment; being ſo impatient of contradiction, that he would never liſten to the admonition of his friends, and ſeldom aſked advice with an intention of adopting it. Having finiſhed his celebrated Letter to the Archbiſhop of Paris, he read it to a perſon, from whom I received the anecdote, and demanded his advice relative to its publication. The perſon, though ſtruck with the fire and ſpirit of the raillery, yet could not avoid repreſenting to him, that his letter, however forcibly written, would never make a convert of the Archbiſhop; that he would only be entangled in endleſs controverſies, and draw upon himſelf much obloquy and ill-will. "Your advice, returned Rouſſeau calmly, is a little too late; it is already publiſhed:" and immediately preſented to him a printed copy of the letter, which he had juſt read to him in manuſcript.

He derived from nature an extreme ſenſibility which bordered upon weakneſs; he ſeems to have wanted one proof of a great mind, that of receiving an obligation, and to have poſſeſſed ſuch pride and ſoreneſs of temper as rendered it impoſſible to ſerve him; for he frequently conſtrued a benefit into an injury. His extreme ſenſibility was irritated and augmented by a troubleſome and painful diſorder, which preyed upon his conſtitution, and at times rendered him unfit for ſociety. And to this complaint, in conjunction with that mercileſs perſecution which he repeatedly endured, ſhould be attributed in a great meaſure the recluſeneſs of his life, and that ſuſpicious miſtruſt which occaſionally bordered upon madneſs.

Rouſſeau had now continued three years at Moitier, greatly delighted with his ſituation, when an unexpected event induced him to quit a retreat, in which he wiſhed to paſs the remainder of his days. This event has been variouſly related. Some authors aſſert, that the populace, incited by the miniſter of the pariſh, in conſequence of the ſcepticiſm diſplayed in his *Lettres Ecrites de la Montagne*, aſſembled in crouds, broke the windows of his houſe, forced open the door, and entering his bed-chamber, treated him with ſuch violence, that he eſcaped with diffi-

culty; and, not to become a martyr to his opinions, quitted the country. Others on the contrary maintain, that neither the miniſter nor the natives were exaſperated againſt him; that his houſekeeper, the ſame perſon whom he afterwards married, diſguſted with the inhabitants, broke the windows, and perſuading her maſter, that he was in danger of being aſſaſſinated, ſo worked upon his apprehenſions, that he quitted Moitier the next morning; and as a proof of this aſſertion, they affirm, that one of the ſtones found in the apartment was too large to have paſſed through the broken panes of glaſs.

The truth, however, ſeems to be, that his pride and ſuſpicious temper had rendered him obnoxious to many of the inhabitants; that the ſcepticiſm and infidelity of his religious opinions, in his *Lettres Ecrites de la Montagne*, had raiſed a party againſt him; that ſome of the people would occaſionally inſult him; that the miniſter of the pariſh ſummoned him before the conſiſtory; that he declined appearing; that the council of ſtate at Neuchatel had propoſed condemning the abovementioned publication, and had even applied to the king of Pruſſia for that purpoſe. Frederic, in an anſwer, which does honour to his head and his heart, while he permitted them to uſe any precautions which might tend

to prevent the ſpreading of ſceptical opinions, yet wiſely forbade all perſecution, and enſured to Rouſſeau a ſecure retreat at Moitier under his immediate protection. Before this anſwer was returned, ſome of the populace, intoxicated with liquor, threw ſtones againſt Rouſſeau's windows with ſuch violence as to penetrate into the kitchen, and to tear off the plaiſter from the walls; but it is certain that none of theſe ſtones did, or could, enter his bed-chamber, as that apartment was ſituated on the other ſide of the houſe. This violence, however, exaggerated by the real or pretended terrors of his houſekeeper, was ſufficient to alarm Rouſſeau: on the next morning he retired from Moitier, and took refuge in the iſland of St. Peter.

The iſland of St. Peter, ſometimes called the iſland of La Motte, and ſometimes Rouſſeau's iſland, lies towards the ſouthern extremity of the lake of Bienne. To this delightful ſpot I made an agreeable excurſion on the fourth of October 1786, in company with the Rev. M. de Meuron, of Neuchatel, and three Engliſh gentlemen. We quitted Neuchatel in the morning; paſſed through St. Blaiſe and the diſtrict of Landeron, and embarked at Neuville, a ſmall town, which, like Bienne, acknowledges the biſhop of Baſle for its liege lord,

lord, but poſſeſſes ſuch rights and immunities as render it an independent republic. It contains about twelve hundred inhabitants. The fine weather, and the clearneſs of the air, enabled us to enjoy the mild beauties of the view as we ſailed to the iſland. To the ſouth-weſt we diſcerned Neuville and its antient caſtle, and to the ſouth-eaſt we admired the Julimont, an inſulated hill adorned with woods of oak, the ſummit of which is frequently viſited by travellers for the beauty of the proſpect; and its name has been derived by fanciful antiquaries from Julius Cæſar. At the extremity of a rocky and woody promontory, which ſtretches from the foot of the Julimont into the lake, ſtands the caſtle of Cerlier, and beyond, at ſome diſtance, the fertile plains watered by the Thiele.

We landed on the ſouth ſide of St. Peter's iſland, and walked through an agreeable meadow ſkirted with vineyards to a large farm-houſe, which was formerly a convent *, and is now inhabited by the ſteward of the general hoſpital at Berne, to which the iſland belongs.

The iſland is about two miles in circumference, and richly wooded with various ſhrubs and trees, particularly with large oaks, beech, and Spaniſh cheſnuts. Its ſurface is gently undulating; the

* It was ſeculariſed at the reformation.

ſouthern

ſouthern ſhore, covered with herbage, forms a gradual ſlope to the lake; the remaining borders are ſteep and rocky: in a few places their ſummits are thinly fringed with ſhrubs; in others their perpendicular ſides are clothed to the water's edge with hanging woods. The views from the different parts of the iſland are beautiful and diverſified; that to the north is the moſt extenſive and pleaſing. It commands the lake of Bienne, which is of an oval form; its cultivated borders ſpotted with villages and caſtles, with the towns of Nidau and Bienne ſtanding on the farther extremity. Agreeable walks are carried through the woods, and terminate at a circular pavilion placed in the center of the iſland. During vintage particularly, and on Sunday, which is the uſual day of feſtivity, the iſland is filled with parties who take refreſhments at the farm-houſe, ſtray about the woods, or dance in the circular building, and animate theſe romantic but ſolitary ſcenes.

Rouſſeau occupied an apartment in the farm-houſe, the only dwelling in the iſland. He lived with the ſteward and his family, who are the preſent inhabitants. The woman informed me, that he paid for his board and lodging forty ſhillings a month, that he uſually roſe at ſix, dined with the family at twelve, and after a ſlight ſupper retired

retired to reſt at nine. She added, that he was extremely cheerful and agreeable; converſed with the family with the greateſt eaſe and complacency, and conformed to their hours and manner of living; that he amuſed himſelf entirely in wandering about the woods, and ſearching for plants, which he uſed to explain to them with ſingular ſatisfaction. Rouſſeau mentions his reſidence in this delightful iſland with the higheſt terms of rapture, and his uſual proneneſs to exaggeration.

"I was permitted to remain only two months in this delightful iſland; but I could have paſſed there two years, two centuries, all eternity without ſuffering a moment's *ennui*, although my whole ſociety conſiſted of the ſteward and family, good but plain people. I eſteem theſe two months the moſt happy period of my life; and ſo happy, that I could have paſſed my whole exiſtence without even a momentary wiſh for another ſituation *."

If we examine in what this *extreme* happineſs conſiſted; he himſelf informs us, that his principal occupation was in *doing nothing*. He did not even unpack his books, and could ſcarcely prevail on himſelf to read, much leſs to anſwer

* See Promenade V.

any

any letters. He aſſiſted the ſteward and his ſervants at work in the vineyards and fields; ſauntered about the woods, and gave himſelf up entirely to botany. He propoſed to write a *Flora Petrinſularis*, or a deſcription of the plants in the iſland; adding on this head, that as a German had publiſhed a book on the kernel of a lemon, in the ſame manner he would compoſe a treatiſe on each ſpecies of graſs, moſs, and lichen; and that he would not leave the moſt minute particle of vegetation undeſcribed. He made occaſional excurſions on the lake, ſometimes coaſting the ſhady banks of the iſland; at other times ſuffering the bark to float without direction into the middle of the lake: then, to uſe his own expreſſions, "he would lie down in the boat, look up to the heavens, and continue in that poſture for ſeveral hours, enjoying a thouſand unconnected and confuſed, but delicious, reveries." He frequently rowed to a ſmall ſandy iſland, which he deſcribes as a moſt beautiful ſpot. It was one of his great amuſements to people this little iſland with rabbits; and as he was conveying, with *great pomp*, the ſteward's family to be preſent at the foundation of this little colony, he deſcribes himſelf as *equally elated with the pilot of the Argonautic expedition.*

From theſe ſimple avocations and *every day*

occurrences, which Rouſſeau relates with that enthuſiaſm and thoſe ſentiments peculiar to himſelf, he draws the following ſublime morality.

" I have remarked, during the viciſſitudes of a long life, that the moſt delightful enjoyments and moſt rapturous pleaſures, are not, upon recollection, thoſe with which I am moſt affected. Such fleeting moments of paſſion and delirium, however rapturous, are, from their very nature, but thinly ſcattered in the path of life. They are too rare and rapid to conſtitute a fixed ſtate; and the happineſs which my heart regrets, is not compoſed of fugitive inſtants, but conſiſts in a ſimple and permanent ſtate, without rapture, the duration of which increaſes the charm, till it finds ſupreme felicity."

This ſtate he deſcribes himſelf as poſſeſſing during his ſhort continuance in the iſland of Bienne; a longer reſidence would probably have diſſolved the charm, which was raiſed by his own heated imagination. That reſtleſſneſs of temper, which is uſually the attendant of great genius, and which was his inſeparable companion, would have probably returned, and embittered the delightful calm which he deſcribes with ſuch rapture and exſtacy. But he had not time to become diſguſted with his ſituation: for the ſame intolerant ſpirit which had hitherto purſued him, followed

followed him even to this ſequeſtered iſland; and he had ſcarcely paſſed two months, before he received an order from the government of Berne to depart from their territories. Rouſſeau was ſo ſhocked at this unexpected command, that he petitioned to be impriſoned for life, only requeſting the uſe of a few books, and that he might be occaſionally permitted to walk in the open air. Soon after this extraordinary requeſt, which ſhews the extreme agitation of his mind, and which cannot but intereſt every feeling mind, he reluctantly quitted the iſland. It does not fall within the compaſs of a letter to dwell upon this ſingular man through the ſubſequent events of his life, or even accompany him to England, where, notwithſtanding the moſt diſtinguiſhed reception, the ſame perverſeneſs of diſpoſition, and the ſame exceſſive delicacy, rendered him no leſs unhappy, than when he was under the preſſure of real calamities, and expoſed to reiterated perſecutions.

I am, &c.

LETTER 49.

Environs of Morat—Mount Vuilly.

IN our way to Morat and Avenches we croſſed the river Thiele, which iſſues from the lake of Neuchatel, diſcharges itſelf into that of Bienne, and ſeparates the principality of Neuchatel from the canton of Berne.

Morat is a bailliage belonging to Berne and Friburgh: the reformation was introduced in 1530, by the majority of voices, in preſence of deputies from Berne and Friburgh. The free ſpirit of the Swiſs governments is in no inſtance more remarkably apparent, than by the mode which they obſerved in embracing, or rejecting, the reformation; as, in many other towns beſide Morat, the queſtion was put to the vote; and the minority generally ſubmitted, with perfect acquieſcence, to the deciſion of the greater number.

Morat ſtands pleaſantly upon the edge of a ſmall lake, about ſix miles long, and two broad; in the midſt of a well-cultivated country. The lakes of Morat and Neuchatel are parallel to each other, and ſeparated only by a ridge of hills: the former is the moſt elevated; for, it diſcharges

itſelf

itſelf by means of the river Broye, into the latter. According to Mr. de Luc, the lake of Morat is fifteen French feet above the level of that of Neuchatel. Both theſe lakes, as well as that of Bienne, formerly extended much farther than their preſent limits: and, from the poſition of the country, appear to have been once united.

Mr. Pennant informs me, that "the vaſt fiſh called the *ſilurus glanis*, or the *ſaluth*, which frequents the lakes of Morat and Neuchatel, has not been caught here in the memory of man. It is well deſcribed, and finely engraven, in Doctor Bloch's Hiſtory of Fiſhes, vol. i. 194. tab. 34. In the time of Geſner two were taken, one of which was eight feet long; but they are ſometimes ſo large as to weigh ſix hundred pounds. It is an eel-ſhaped fiſh, very ſmooth, round and thick, and has a great head. The mouth is furniſhed with four ſhort, and two very long, whiſkers. It is very inactive and ſlow in its motions, and loves the deep and muddy parts of the lakes. They are found in many of the great freſh waters of Europe, and abundantly in the Volga."

On my ſubſequent expeditions into theſe parts, I examined with greater attention the environs of Morat, during ſeveral days, which I paſſed moſt agreeably at Coujouvaux, a ſeat belonging

to

to the count of Dieſbach, and at Grens with M. de Garville, a French gentleman, who is ſo much attached to the beauties of this delightful country, that he has built a villa in a pleaſing ſituation near the banks of the lake of Morat, where he comes every year from Paris to paſs the ſummer. By theſe families I was received without any other introduction, than as being the author of the Letters on Switzerland, and with that frankneſs and cordiality ſo flattering to a ſtranger. I found the environs of Morat, though not ſo wild and romantic as many other parts of Switzerland, yet extremely deſirable for a conſtant reſidence.

I made ſeveral excurſions acroſs the lake, to an inſulated ridge between the lakes of Neuchatel and Morat, and enjoyed many delightful points of view. Of theſe various proſpects, the moſt remarkable is from the ſummit of Mount Vuilly, where I ſeated myſelf on the edge of an abrupt precipice. From thence I looked down upon the lakes of Bienne, Morat, and Neuchatel; obſerved the Broye entering the lake of Morat, iſſuing from thence and winding through a marſhy plain into the lake of Neuchatel; the Thiele flowing from the latter, and haſtening to fall into the lake of Bienne; the fertile and variegated countries encircling thoſe bodies of water; and the grounds riſing in regular gradations from

plains to alps. But what renders this charming ſpot more particularly ſtriking is, that it is perhaps the only central point from which the eye can at once comprehend the vaſt amphitheatre formed, on one ſide, by the Jura ſtretching from the environs of Geneva as far as Baſle, and, on the other, by that ſtupendous chain of ſnowy alps, which extends from the frontiers of Italy to the confines of Germany, and is loſt at each extremity in the immenſe horizon.

Impreſſed with this ſublime view, I caſt my eyes downwards over that dead and extenſive moraſs through which the Broye ſerpentines; and cried out in the language of poetry, which knows how to animate the dulleſt objects:

Quittons les bois et les montagnes
*Je vois couler la Broye * à travers les roſeaux.*
Son onde partagée en différens canaux
S'egare avec plaiſir dans de vertes campagnes,
Et forme dans la plaine un labyrinthe d'eaux.
Rivière tranquille et chérie
Que j'aime a ſuivre tes détours!
Ton eau ſilencieuſe en ſon paiſible cours,
Preſente à mon eſprit l'image de la vie;
Elle ſemble immobile, et s'écoule toujours.

* From a poem, entitled "*La vue d'Anet.*" I have followed the example of M. Sinner, in his Voy. Hiſt. et Pol. de la Suiſſe, who ſubſtitutes the Broye for the Thiele, to which the lines in the original are applied.

LETTER

LETTER 50.

Battle of Morat—War between the Swiſs and Charles the Bold, Duke of Burgundy—Its Conſequences.

MORAT is celebrated for the obſtinate ſiege it ſuſtained againſt Charles the Bold, duke of Burgundy, which was followed by the battle of Morat, fought on the 22d of June 1476. In this famous engagement the duke was routed, and his whole army almoſt entirely deſtroyed, by the confederate troops of Switzerland. Not far from the town, and adjoining to the high road, a monument of this victory ſtill remains: it is a ſquare building, filled with the bones of the Burgundian ſoldiers, who were ſlain at the ſiege and in the battle. To judge from the quantity of theſe bones, the number of the ſlaughtered muſt have been conſiderable. Among ſeveral inſcriptions in the Latin and German languages, relative to that memorable victory, I tranſcribed the following on account of its conciſeneſs:

Deo Opt: Max:
Caroli Inclyti et Fortiſſimi
Burgundiæ Ducis Exercitus
Muratum obſidens ab Helvetiis
Cæſus hoc ſui Monumentum reliquit.
Ann: 1476.

This war, which Charles the Bold carried on againſt the Swiſs with a temerity peculiar to himſelf, forms a remarkable æra in the hiſtory of this country; and was attended with ſome very extraordinary circumſtances. From the time of the famous revolution in 1308, which gave riſe to the Helvetic confederacy, to the end of the following century, the Swiſs republics deprived the Houſe of Auſtria of all its territories ſituated in Switzerland; and continued in poſſeſſion, notwithſtanding the various attempts of the different dukes to recover their loſt domains. But of all the princes of that Houſe, Sigiſmond the ſimple, archduke of Auſtria of the branch of Tyrol, was more particularly engaged in hoſtilities with the Swiſs cantons, and their allies: for, his hereditary dominions in Suabia and Alſace bordering upon Switzerland, induced him to enter more frequently into theſe diſputes, than the other branch, which was in poſſeſſion of the imperial throne.

In

In the courſe of theſe hoſtilities, Sigiſmond was compelled to cede a conſiderable part of his territories to the Swiſs republics; particularly the rich country of Thurgau to the ſeven cantons, which at that period compoſed the Helvetic league *. Inflamed by theſe repeated loſſes, and the humiliating conditions of peace he was conſtrained to accept in 1468, he endeavoured to engage ſome of the neighbouring powers in a confederacy againſt the Swiſs cantons. Having firſt ineffectually applied to Louis the Eleventh king of France, he at length addreſſed himſelf to Charles the Bold, duke of Burgundy.

Charles having ſucceeded to the poſſeſſion of Franche Comté, Burgundy, Artois, and Flanders, together with the greateſt part of the United Provinces; poſſeſſed as ample revenues, and as extenſive territories, as the moſt potent ſovereign of his time. Magnificent, impetuous, and enterpriſing, he neglected no opportunity of aggrandiſing his power, and ſet no bounds to the projects of his reſtleſs ambition. He had formed the plan of erecting Burgundy into a monarchy; and had already in imagination appropriated to

* Berne obtained the co-regency of Thurgau at the peace of Arau, 1712.

himſelf Lorraine and part of Switzerland; which he propoſed to annex by conqueſt to his hereditary dominions.

A prince of ſuch a character being naturally well diſpoſed to liſten to any overtures, or to undertake any war, that might advance his ambitious ſchemes, received with eagerneſs the propoſitions of Sigiſmond; he flattered that credulous prince with the hopes of receiving in marriage his daughter Mary, heireſs of his extenſive dominions; and prevailed upon him, by the loan of eighty thouſand florins, to ſurrender Sundgau, Alſace, Briſgau, and the four Foreſt-towns; promiſing, upon the repayment of that ſum, to reſtore the ſaid provinces.

By this alliance, Sigiſmond acquired a ſum of money to aſſiſt him in his preparations againſt the Swiſs; protected, as he thought, his hereditary dominions from their enterpriſes; and ſecured a powerful ally againſt the antient enemies of his family. The reverſe, however, proved to be the event: for, by a ſtrange fatality, this league, which was intended to cement the union of the two princes, ſerved only to divide them; and occaſioned the firſt perpetual alliance between the Swiſs cantons and a prince of the Houſe of Auſtria.

Charles,

Charles, upon the concluſion of this treaty, informed the cantons, that he had taken Sigiſmond under his protection, and would defend him to the utmoſt of his power. Meanwhile, the bailifs, whom he placed over his newly acquired territories in Alſace, oppreſſed the people; laid embargoes upon the commerce of Mulhauſen, a confederate of the cantons; and withheld the rents of the eſtates belonging to the Swiſs in Sundgau and Alſace.

Theſe grievances being laid before Charles in an embaſſy, which Berne diſpatched to his court in the name of the confederate cantons, the duke received it with haughtineſs; and after compelling the deputies to kneel while they delivered their remonſtrance, diſmiſſed them without an anſwer. This diſdainful and ignominious treatment was ill brooked by a free people, unaccuſtomed to crouch before the inſolence of power; and the warmth of their juſt indignation was ſtill more inflamed by the artful policy of Louis the Eleventh, who, jealous of the duke of Burgundy's power, entered into a defenſive alliance with the Swiſs republics, in order to counteract the deſigns of that ambitious prince.

But Louis ſtill further ſtrengthened the Swiſs, by effecting a reconciliation between them and Sigiſmond. The latter had no ſooner ſurrendered

to Charles Sundgau, Alſace, and the other dominions, than he began to be ſenſible of his error. The duke of Burgundy not only oppreſſed his new ſubjects, but ſeemed determined, even ſhould the eighty thouſand florins be repaid, to keep poſſeſſion of theſe conditional territories, and did not appear inclined to fulfil the promiſe of beſtowing his daughter upon the archduke. From theſe conſiderations, Sigiſmond, induced through the mediation of Louis, to throw himſelf under the protection of the Swiſs, concluded the famous treaty, which was confirmed at Lucerne in 1474, and is called the *hereditary union*; an appellation appropriated to the treaties between the Swiſs and the Houſe of Auſtria. Sigiſmond renounced all right to the provinces which the Swiſs had conquered from the Houſe of Auſtria; the two contracting parties formed a defenſive alliance; and engaged to guarantee reciprocally each other's territories. Thus the Swiſs, after having deprived Sigiſmond of all his poſſeſſions in their country, engaged to ſupport his title to thoſe very provinces, which he had mortgaged in order to ſtrengthen his arms againſt themſelves; and Sigiſmond accepted a guarantee from the moſt inveterate enemies of his family.

This treaty, which entirely changed the policy of the Swiſs republics, was ſolely contrived by the artful intrigues of Louis the Eleventh: the jealouſy of that deſigning monarch turned into another channel the vaſt preparations of the duke of Burgundy; preparations which would probably have been attended with more ſucceſs, had they been directed againſt France.

Charles too late perceiving the imprudence of his conduct towards the Swiſs republics, in vain exerted all his efforts to engage them in a neutrality. They rejected his propoſals of reconciliation with firmneſs, prepared, with their uſual vigour, for a war, which now appeared inevitable, and even advanced the eighty thouſand florins to Sigiſmond, who demanded the reſtitution of his lands, which the duke of Burgundy evaded under various pretexts. The latter having concluded a ſeparate peace with Louis, turned his whole force againſt the Swiſs, entered their country with an army of ſixty thouſand men; and, laying ſiege to Granſon, carried it by aſſault. But his ſucceſs ended there: for, at the ſubſequent battles of Granſon and Morat, he was totally defeated, and his attempts upon Switzerland entirely fruſtrated *. Nevertheleſs, his

* Charles entered Switzerland confident of ſubduing that country.

his reſtleſs and ambitious ſpirit ſtill unſubdued, impelled him to attack the duke of Lorraine. But that prince, having engaged in his pay a body of eight thouſand Swiſs, obtained a com-

country. The effect which this unexpected and humiliating diſappointment had upon his ſpirits and conſtitution, is related by Philip de Comines, with his uſual minuteneſs, in his Memoirs addreſſed to Angelo Cattho, archbiſhop of Vienne in Dauphiné. His account is curious, and will give ſome idea of the violent and impetuous character of Charles:

" His concern and diſtraction for his firſt defeat at Gran-
" ſon was ſo great, and made ſuch deep impreſſion on his
" ſpirits, that it threw him into a violent and dangerous fit
" of ſickneſs: for, whereas before, his choler and natural
" heat was ſo great, that he drank no wine, only in the
" morning he took a little tiſane, ſweetened with conſerve
" of roſes, to refreſh himſelf: this ſudden melancholy had
" ſo altered his conſtitution, he was now forced to drink the
" ſtrongeſt wine that could be got, without any water.
" And, in order to draw the blood from his heart, ſome
" burning tow was put into the cupping-glaſſes, and ap-
" plied to his ſide. But this, my lord of Vienne, you know
" better than I; for, your lordſhip attended on him during
" the whole courſe of his illneſs, and ſpared no pains that
" might contribute to his recovery: and it was by your
" perſuaſion that the duke was prevailed upon to cut his
" beard, which was of a prodigious length. In my opi-
" nion his underſtanding was never ſo perfect, nor his
" ſenſes ſo ſedate and compoſed, after this fit of ſickneſs, as
" before."

Uvedale's Tranſ. Vol. I. p. 423.

plete

plete victory, near Nancy, over Charles, who was ſlain in the engagement *.

His death terminated this bloody war; in which the Swiſs gave the moſt diſtinguiſhing proofs of invincible valour, and ſpread the fame of their military virtues throughout all Europe, but from which they obtained no ſolid advantage †. In fact, the principal and almoſt ſole

* The death of Charles at the battle of Nancy, was attended with ſome very extraordinary circumſtances; for the particulars of which, ſee the curious account, extracted from Philip de Comines, and the Chronique Scandaleuſe of John de Troyes, in Wraxal's intereſting Memoirs of the Kings of France of the Houſe of Valois.

† "And what," ſays Comines, "was the occaſion of "this war? It was begun on account of a waggon of ſheep-"ſkins, which the lord of Romont took from a Swiſs, who "was paſſing through his territories. If God had not "abandoned the duke, it is not probable, that he would "have put himſelf into ſo much danger for ſo trifling a cir-"cumſtance; conſidering the offers that were made to him; "againſt what ſort of people he was engaged; and from "whence neither profit nor glory could accrue to him. For, "the Swiſs were not in ſuch repute, as they are in at pre-"ſent, and nothing could be poorer: inſomuch that one of "their ambaſſadors, as he was endeavouring to prevent the "duke from engaging in that war, remonſtrated; that he "could gain nothing by attacking them: for, their country "was ſo barren, that the ſpurs of his troops and the bits of "their horſes were worth more, than could be furniſhed by "all the Swiſs territories, in caſe they were conquered."

benefit accrued to Louis the Eleventh; as by the death of Charles, he not only was releaſed from a dangerous and enterpriſing rival, but alſo annexed the rich provinces of Burgundy and Artois to the crown of France.

But, although the immediate advantages which the Swiſs derived from the death of Charles, were unimportant; yet the conſequences operated very conſiderably on their future politics. Mary of Burgundy, the only ſurviving child and heireſs of Charles, married the archduke Maximilian, eldeſt ſon of the emperor Frederic the Third, and afterwards emperor himſelf. By this marriage, the Houſe of Auſtria acquired poſſeſſion of the Netherlands; and having frequent diſputes with France, the alliance of the Swiſs was ſtrenuouſly courted by both parties. Thus this country, being ſecured from all invaſions, acceded as occaſion offered to the two rival powers; and aſſiſted each party by turns, as the intrigues, or rather as the ſubſidies, of the one or the other prevailed.

Theſe intrigues gave riſe to different alliances, contracted with the Houſe of Auſtria, the kings of France, the pope, and the dukes of Savoy and Milan.—But, not to enter more minutely into their hiſtory, I will only obſerve in general, that hitherto the Swiſs had acted with great diſintereſtedneſs

tereſtedneſs in all their treaties, and had never taken the field but either to ſecure their liberties, or to drive their enemies from Switzerland. It was about the period of the Burgundian war, that the ſubſidies which they obtained from Louis the Eleventh, taught them the diſgraceful arts of mercenary politics; as the rich plunder which they took from the duke of Burgundy gave, in ſome meaſure, the firſt taint to their original ſimplicity of manners; till at length, *Swiſs venality* has become a proverbial expreſſion.

I am, &c.

LETTER

LETTER 51.

Antiquities of Avenches.

FEW antient towns have occaſioned more controverſy among antiquarians, or given riſe to ſuch a variety of conjectures concerning its origin and importance, as Avenches, the principal burgh of a bailliage in the Pays de Vaud. Some contend that it was the capital of all Helvetia; becauſe Tacitus calls it *Aventicum gentis caput:* while others have endeavoured to prove, that by this expreſſion the hiſtorian intended only to denote the capital town of its particular diſtrict. Agreeably to ſome accounts, the city was built, and a Roman colony founded, by Veſpaſian: with more probability, according to others, it was only repaired and beautified by that emperor, after it had been laid waſte, and almoſt ruined, by Vitellius.

Without entering however into dry and unintereſting diſcuſſions, it was formerly a very conſiderable town, and under the dominion of the Romans; as appears not only from ſeveral mileſtones, found in many parts of the Pays de Vaud, moſt

moſt of which are numbered from *Aventicum*, as the principal place of reference; but more particularly from the preſent ruins. I ſhall ſlightly mention a few of theſe ruins, merely to ſhew you, that the inhabitants do not boaſt of their antiquity without ſufficient evidence.

We traced the ſite of the antient walls, which appear to have encloſed a ſpace near five miles in circumference. The preſent town occupies but a very inconſiderable part of this ground; the remainder is covered with corn-fields and meadows. One of the antient towers ſtill exiſts: it is a ſemicircular building, with the convex ſide turned towards the town.

We next examined a coarſe moſaic pavement, diſcovered ſome years ago in ploughing a field. Being now encloſed by a barn, which is let to ſome peaſants, the ignorant occupiers are taking the moſt effectual method to deſtroy it, by employing it as a drying-houſe for tobacco, and by ſuffering ſtrangers to take away ſpecimens. Even the government of Berne was ſo inſenſible of its value, that they permitted the count of Caylus to remove a pannel, containing the figures of two Bacchanalians.

This moſaic was the floor of an antient bath, and is about ſixty feet in length and forty in breadth: the general form is perfect; and, although

though ſeveral parts are broken and loſt, yet from the preſent remains the configuration of the whole may be eaſily traced.

The pavement conſiſts of three compartments: thoſe at each extremity are regularly divided into fifteen octagons, eight ſmall ſquares, and ſixteen ſmall triangles. Five of theſe octagons in each compartment, repreſented human figures in various attitudes, but chiefly Bacchanalian men and women: the remaining octagons were compoſed of three different patterns. The vacant parts between the octagons are filled with the ſmall ſquares; and towards the outward border, with the ſmall triangles. The middle compartment is divided into oblong pannels; in the largeſt of which is an octagon bath of white marble, of about ſix feet in diameter, and a foot and a half deep: the ſides of the bath are ornamented with dolphins. Of theſe three compartments, one is almoſt perfect; the others are very much defaced. Each of the pannels is encircled with ſeveral borders prettily diverſified; and a general border encloſes the whole.

Schmidt, in his *Recueil d'Antiquités de la Suiſſe*, ingeniouſly conjectures, from a *glory* which ſurrounds a head of Bacchus in this moſaic, that it was wrought during ſome part of the intervening age

age between Veſpaſian and Marcus Aurelius; becauſe that mark of divinity is not uſual upon any monuments of Roman antiquity prior to that period. He adds, that the ſame kind of *glory* is obſerved upon the head of Trajan in an antient painting at Rome; upon that of Antoninus Pius on a medal; and on the arch of Conſtantine *. He ſtrengthens this conjecture, by further remarking, that the head-dreſs of a Bacchanalian woman repreſented in this moſaic, reſembles the head-dreſs on the medals of the empreſſes Plotina and Sabina †.

From thence we were conducted to the ruins of an antient amphitheatre, within the walls of the bailif's garden. The general form and ſize of this building are tolerably perfect, as alſo parts of the brick walls which encloſed it. The diameter of the arena was, as well as we could judge by pacing it, about eighty yards; which

* The arch of Conſtantine at Rome being partly formed from the Forum of Trajan, the architect improperly tranſferred the figures. This circumſtance accounts for the *glory* obſerved round the head of Trajan, on the arch of Conſtantine, which has been ſuppoſed to have repreſented the head of Conſtantine.

† The curious reader will find in the *Recueil*, cited in the text, a very accurate deſcription and engraving of this moſaic.

muſt neceſſarily have been an uncertain eſtimate: as a former bailif brought in a conſiderable quantity of earth, in order to plant fruit-trees; conceiving, I ſuppoſe, that good fruit was of more value, than to be able to determine the preciſe extent of an antient amphitheatre. Under a tower, partly built of Roman materials, is a cell in which the animals were probably let looſe upon the arena. On the outſide are ſtill to be ſeen the remains of five dens: and the walls are adorned with ſeveral pieces of rude ſculpture conſiderably defaced.

Not far from theſe ruins ſtands a large column of white marble, about fifty feet in height, compoſed of large maſſes, nicely joined together without cement; and near it lies a conſiderable fragment of defaced ſculpture, which ſeems to have once formed part of the portal belonging to a magnificent temple. At a ſmall diſtance from this column, in the high road, we obſerved a cornice of white marble, ſculptured with urns and griffins. As we walked through the town, we remarked ſeveral other maſſes of cornice, ornamented with ſea-horſes and urns; and ſome marble columns of beautiful proportions.

About a mile from Avenches, near the village of Coppet, on the other ſide of a little ſtream, which ſeparates the canton of Friburgh from that

of Berne, are the remains of a ſmall aqueduct. They were diſcovered about fifteen years ago, by the accidental falling of a ſand-hill which covered the aqueduct. The outſide is formed of ſtones and mortar, and the inſide of red Roman cement; the vault of the arch may be about two feet and a half high, and one and a half broad. This aqueduct has been traced to the eaſt-ſide of the town, and alſo to near the marble column before mentioned. We were alſo informed that it extends to the tower of Gauſa, between Vevay and Lauſanne; and that, between Villarſel and Marnau, about four leagues from Coppet, an arch of nearly the ſame dimenſions is excavated in the ſolid rock. But whether theſe ſeveral parts actually communicated with each other, or indeed whether they really exiſt, are facts which, (having only viewed thoſe remains that are viſible near this town) I muſt be contented to reſt on the credit of my informers.

POSTSCRIPT.

When I viſited the ruins of Avenches in October 1786, I had much ſatisfaction in finding, that the bailif, Mr. Tcharner, paid great attention to theſe remains, and particularly to the

moſaic. I could not avoid remarking to the bailif, who politely favoured us with his company; that every lover of antiquity muſt regret, his predeceſſors had not ſhewn the ſame taſte; as the ruins of Avenches would have been a greater object of curioſity. Several excavations had been lately made, at firſt by Lord Northampton, who has a houſe in the neighbourhood, and continued at the expence of Berne. A coarſe moſaic pavement, a few fragments of walls rudely painted, and ſome trifling remains of antient baths, are the only veſtiges of antiquity hitherto diſcovered.

I am, &c.

LETTER

LETTER 52.

Town and Canton of Friburgh—Population—Government—Secret Chamber.

FRIBURGH was built in 1179, by Berchtold the Fourth, duke of Zæringen, who endowed it with conſiderable privileges. Upon the extinction of the male line of the houſe of Zæringen, in 1218 *, Ulric of Kyburgh obtained the ſovereignty, in right of his wife Anne, ſiſter of the laſt duke Berchtold the Fifth. It came by

* The houſe of Zæringen was deſcended from the antient counts of Alſace, by Berchtold count of Briſgau. His grandſon, Berchtold the Second, built the caſtle of Zæringen, ſituated near a village of the ſame name, not far from the preſent town of Friburgh, capital of the Briſgau. Upon the demiſe of Berchtold the Fifth, the laſt duke, without male iſſue, his territories were divided between his collateral heirs, the dukes of Teck, and his two ſiſters Agnes and Anne. Agnes married Egeno, count of Urach; by which marriage he obtained poſſeſſion of Friburgh in the Briſgau: his poſterity were called counts of Friburgh. Anne married Ulric, count of Kyburgh: their daughter Hedwige, was wife of Albert count of Habſburgh, and mother of the emperor Rodolph the Firſt.

marriage into the poſſeſſion of Eberhard count of Habſburgh-Lauffenburgh; who ſold it to his couſin Rhodolph of Habſburgh, afterwards emperor. During this period, a continual rivalſhip ſubſiſting between Berne and Friburgh, they were frequently engaged in mutual hoſtilities: at length all differences were compoſed; and the two cities, in 1403, entered into a perpetual alliance.

Friburgh continued under the dominion of the houſe of Auſtria, and was concerned in all the quarrels in which that family was engaged with the Swiſs republics, until the middle of the fifteenth century; when, by a very ſingular revolution, it renounced all allegiance to the archduke Albert, and put itſelf under the protection of the duke of Savoy. From this æra it occaſionally aſſiſted the cantons againſt the houſe of Auſtria; and in the war between the Swiſs and Charles the Bold, its troops had a ſhare in the victories of Granſon and Morat. Soon after the battle of Morat, it became a free and independent republic; and, in 1481, was admitted a member of the Helvetic confederacy.

The ſituation of the town, though not one of the moſt beautiful, is certainly one of the moſt pictureſque and wild in Switzerland. It ſtands partly

partly in a ſmall plain, partly on bold acclivities, on a ridge of rugged rocks, half encircled by the river Sane; and is ſo entirely concealed by the circumjacent hills, that the traveller ſcarcely catches the ſmalleſt glimpſe, until he burſts upon a view of the whole town from the overhanging eminence.

The fortifications, which conſiſt of high ſtone walls and towers, encloſe a circumference of about four miles; within which ſpace the eye comprehends a ſingular mixture of houſes, rocks, thickets, and meadows, varying inſtantly from wild to agreeable, from the buſtle of a town to the ſolitude of the deepeſt retirement. The Sane winds in ſuch a ſerpentine manner as to form in its courſe, within the ſpace of two miles, five obtuſe angles, between which the intervening parts of the current are parallel to each other.

On all ſides the deſcent to the town is extremely ſteep: in one place the ſtreets even paſs over the roofs of the houſes. Many of the edifices are raiſed in regular gradation like the ſeats of an amphitheatre: many overhang the edge of a precipice in ſuch a manner, that on looking down, a weak head would be apt to turn giddy; and an unfortunate lover, repulſed in his ſuit, might inſtantly put an end to his pains, by taking a leap

from the parlour window, without the trouble of a journey to Leucate, or to the rocks of Meillerie.

But the moſt extraordinary point of view is from the Pont-neuf. To the north-weſt, part of the town ſtands boldly on the ſides and the piked back of an abrupt ridge; and from eaſt to weſt a ſemicircle of high perpendicular rocks is ſeen, whoſe baſe is waſhed and undermined by the winding Sane, and whoſe tops and ſides are thinly ſcattered with ſhrubs and underwood. On the higheſt point of the rocks, and on the very edge of the precipice, appears, half-hanging in the air, the gate of the town called Bourguillon: a ſtranger ſtanding on the bridge would compare it to Laputa, or the Flying Iſland in Gulliver's Travels, and would not conceive it to be acceſſible but by means of a cord and pulleys. In the midſt of the river I obſerved a large fragment of ſtone, which a few years ago fell from the rocky heights, was carried under one of the arches, and in conjunction with other fragments ſtopping the current, raiſed it more than ten feet above its uſual level, threatening the lower parts of the town with a ſudden inundation.

A traveller fond of wild and romantic ſcenery will

will not fail to viſit the Moulin de la Motte, and the valley of Goteron. The Moulin de la Motte is a miller's dwelling, hollowed in the midſt of an impending rock; near it iſſues a ſmall torrent, which turning the mill, falls within a few paces into the Sane. This ſingular dwelling ſeems ſo far removed from "*the buſy hum of men,*" as to be rather ſituated in a remote ſolitude, than within the walls of a fortified town. Near it there is an aſcent of four hundred ſteps to the Place des Fontaines, in the upper part of the town.

The valley of Goteron, which lies on the north-weſt of the town near the bridge leading to Berne, takes its name from the Goteron, a ſmall rivulet that runs through it, and turns ſeveral mills. This valley, extremely narrow and above two miles in length, is bounded on each ſide by high and overhanging rocks of ſand-ſtone. M. Vernet, the celebrated land-ſcape painter, is ſaid to have ſtudied theſe rocks with great attention; and frequently to have declared, that, excepting thoſe of Tivoli, he never ſaw any rocks whoſe varying tints had a more pleaſing and harmonious effect. The valley contains ſeveral mills; an iron foundery, where the ore brought from Franche Comté is forged; and a manufacture of printed linen and cotton, lately

lately eſtabliſhed by ſome merchants of Neuchatel, under the protection and encouragement of government.

The houſes of Friburgh, conſtructed with a grey ſand-ſtone drawn from a neighbouring quarry, are neat and well-built; but the whole town has a dull and inanimate appearance.

Among the few objects worthy of particular notice in the town, are, the cathedral, an elegant Gothic edifice, erected in the latter end of the 14th century, and remarkable for the height and ſolidity of the tower; the town-houſe, an antient building, which formerly compoſed part of the palace belonging to the dukes of Zæringen; and alſo a lime-tree, in the middle of the principal ſquare. Tradition reports, that this tree was inſtantly planted by one of the ſoldiers, the 22d of June 1477, on his return from the battle of Morat: an emblem of Swiſs liberty, which took deep root on the memorable defeat of Charles the Bold; and thus remaining firm againſt the conflicts of time, has continued to ſpread and flouriſh, to the admiration and example of future ages.

The ſociety of Friburgh is extremely agreeable; the gentry are frank and hoſpitable, and blend French politeneſs with great ſimplicity of manners. Dinner is uſually ſerved at twelve; and

and ſupper ſeldom later than eight. I never experienced a more cordial reception in any town of Switzerland.

The biſhop of Lauſanne, called here the biſhop of Friburgh, reſides in this city. He is appointed by the pope, uſually at the recommendation of the French court; and his revenues, including a ſmall penſion from France, and from the abbey of Hauterive, of which he was abbot, amount to about £. 400 *per ann.* His dioceſe extends over the whole canton, and part of that of Soleure. In all his acts and deeds he ſigns himſelf Biſhop and Count of Lauſanne, and Prince of the German empire.

The preſent biſhop, Bernhard of Lenzburgh, is a man of letters, and an honour to his profeſſion: he is employed in preparing for the public a biography of the illuſtrious and learned men born in the canton of Friburgh, who have diſtinguiſhed themſelves, either in the civil, military, or literary line.

This canton is entirely catholic. Its population in 1785 may be eſtimated from the following table.

The town contained	— —	5,011
The environs	— —	15,500
The remainder of the canton	—	33,078
Abſentees	— —	4,000
Number of inhabitants	—	57,589

The ſovereign power reſides in the Great Council of Two Hundred; comprizing the two Advoyers, the Chancellor, the Grand Sautier, the Senate, or Little Council of Twenty-four, the Sixty, from which body are choſen the bannerets and principal magiſtrates, and the remaining hundred and twelve members, who are ſimply denominated Burghers.

The only perſons capable of being elected members of this ſovereign council, and of courſe enjoying any ſhare in the government, are the *ſecret* burghers, or a certain number of families divided into four *bannieres*, or tribes of the town: they are called *ſecret* burghers, in order to diſtinguiſh them from the other citizens, partly inhabiting the town, and partly the twenty-four pariſhes in the environs. The latter enjoy the right of appointing the advoyers, from certain candidates propoſed by the ſixty, and of annually confirming the ſaid magiſtrates. Hence many

authors

authors have called this government ariſto-democratical, but erroneouſly: for, as the power of the people is confined to the act of chooſing and confirming the two advoyers; and as the ſupreme authority abſolutely reſides in the council of two hundred, neceſſarily ſupplied by a limited number of patrician families, the government is, in the ſtricteſt ſenſe, a mere ariſtocracy.

Inſtead of troubling you with an unintereſting detail of thoſe points in which the government of Friburgh reſembles that of the other ariſtocratical cantons, I ſhall confine myſelf to thoſe peculiar circumſtances by which it is diſcriminated from them. This difference may be principally ſaid to conſiſt in the three following articles:

1. The *blind ballot*, or mode by which ſeveral important offices are ſupplied, and particularly by which the members of the ſenate and the ſixty are choſen. This mode of election was inſtituted in order to prevent venality; and is too ſingular not to be diſtinctly explained. The names of the candidates are placed privately in a box, containing as many partitions as there are perſons who ſolicit the charge. Into each of theſe partitions the electors throw in their ſuffrages as chance directs, without knowing to whom they may happen to give their votes; and the candidate

didate who has the moſt of theſe caſual ballots is elected.

2. The clauſe which diſables certain noble families from bearing the office of banneret, or from being choſen members of the *ſecret chamber*. Theſe families are ſixteen in number: ſome were acknowledged noble, even as early as the foundation of the republic; others ſucceſſively obtained titles of counts and barons from the foreign princes to whom they were attached, and in whoſe armies they had ſerved.

3. But the moſt remarkable circumſtance which diſcriminates the conſtitution of Friburgh from that of the other ariſtocratical cantons, is a committee diſtinguiſhed by the name of the *Secret Chamber*, which, though not any public or reſponſible part of adminiſtration, is yet the concealed ſpring that puts the wheels of government in motion. As the prerogatives and operation of this *ſecret chamber* are in general but little known, and ſtill leſs underſtood; I flatter myſelf that it will not be unintereſting to lay before you a conciſe account of its origin and conſtitution.

The *ſecret chamber*, forming a part of the council of ſixty, is compoſed of the four bannerets, who are reciprocally choſen by the council of two hundred from the four tribes; and of twenty-

twenty-four members, who are appointed by a majority of their own body: the former remain in office four years; the latter continue for life.

The *ſecret chamber* aſſembles ordinarily four times in the year, or oftener if occaſion requires: and is convoked by a banneret. The two principal meetings of this body are between the Sunday before St. John's day and the twenty-fourth of June; and uſually on the anniverſary of the battle of Morat, for the purpoſe of appointing the vacant places in the council of two hundred; and on Tueſday in Whitſun-week, when they ſupply the vacancies in their own body.

Its origin is thus traced in the records of the republic. From 1347 to 1387, the three bannerets nominated twenty perſons from each of the three tribes into which it was then divided; and theſe ſixty aſſembled on the Sunday before St. John's day, to eſtabliſh the Little Council and elect the treaſurer; from hence is derived the origin of the ſixty, and of the aſſembly which meets on the Sunday now called *Secret Sunday*. It conſiſts of the whole council of two hundred, excepting the advoyers and ſenate, and is preſided by the chancellor, the four bannerets, and the members of the *ſecret chamber*, who take the places of the ſenators. This aſſembly reviews, confirms,

confirms, or cenſures, if neceſſary, the ſenators, the bannerets, and the ſixty; the members of each tribe retire, while their conduct is examined and reviewed by the remainder. The ſame aſſembly fills up alſo the vacant places in the ſenate, and in the ſixty, by blind ballot.

In 1387, the nomination of the ſixty was transferred from the bannerets to the aſſembly which met on the *Secret Sunday:* and that aſſembly was alſo empowered to appoint the Little Council, the treaſurer, the ſixty, and the remaining members of the two hundred. By a charter of the ſame year, four coadjutors, drawn from the ſixty, are given to each banneret: and it appears that theſe coadjutors were choſen, in the ſame manner as the bannerets, ſeparately by each tribe: and this may probably be conſidered as the origin of the *ſecret chamber.* A charter of the year 1392, confirms the *Secret Sunday* in the right of nominating the ſixty, and confers on the bannerets that of chooſing the *prud-hommes,* who accompanied them when they convoked the people on St. John's day; and it is probable that the bannerets alſo appointed their coadjutors. This nomination took place, as at preſent, on the Tueſday in Whitſun-week. The town being at that period only divided into three tribes,

tribes, the coadjutors were limited to twelve; and when a fourth tribe was added, their number was augmented to ſixteen.

A charter dated 1404 confirms, in many inſtances, the abovementioned arrangements; but does not grant to the *Secret Sunday* the nomination of the two hundred: a right at that time enjoyed by the bannerets, who ſhared it with their coadjutors, or the *ſecrets*; and thus is probably derived the power of appointing the members of the two hundred, ſince conſtantly exerciſed by the bannerets and *ſecrets*.

The ſame charter orders the bannerets to aſſemble on Whit-Tueſday, in conjunction with the ſixty of the preceding year, for the purpoſe of chooſing four members of the ſixty from each tribe, who ſhould accompany the bannerets when they convoked the aſſembly of burghers and inhabitants on St. John's day; and two additional members for convening the aſſembly of *Secret Sunday*. Here then are ſix perſons from each tribe employed in theſe convocations, or in all twenty-four perſons, the number of members who now form the *ſecret chamber*. The ſame charter alſo enjoins the bannerets and *ſecrets* to collect the votes in all elections and deliberations; an office which they continue to exerciſe to this day.

As early as the beginning of the 15th century, the bannerets and *ſecrets* aſſembled at Chriſtmas and Eaſter, for the purpoſe of preparing and digeſting ſuch motions as were to be laid before the Council of two hundred, which adopted, modified, or rejected them.

As the bannerets probably continued to employ the ſame coadjutors in convoking the aſſemblies on St. John's day, and on *Secret Sunday*, the *ſecret chamber*, compoſed of theſe twenty-four coadjutors, at length became a permanent body, and enjoys the following prerogatives. 1. It convokes, in conjunction with the bannerets, the people on St. John's day, and the aſſembly which meets on *Secret Sunday*. 2. It prepares and draws up all the laws and ordinances; enjoys the ſole power of propoſing in the Great Council; and, by means of the bannerets, of putting a negative on any motion, by affirming it to be contrary to the conſtitution, without the neceſſity of proving that it is ſo. 3. It collects the votes in the election or confirmation of the advoyer, at the meeting of the people on St. John's day, and in the deliberations of the Great Council. 4. It fills up all the vacancies in that Council; 5. Suſpends, depoſes, confirms, and cenſures its members; 6. Confirms, or ſuſpends and depoſes its own members; makes

regulations for the interior adminiſtration of its own body; appoints the manner of electing its own members, and filling up the vacancies in the Great Council; 7. Fixes on the time for thoſe elections, and the ſum of money which each member is permitted to receive from thoſe who are elected. 8. It can exclude all candidates from being choſen members of the ſenate, of the ſixty, from the office of bailifs, and other important charges; either by refuſal to preſent, or by rejecting them as incapable.

All theſe prerogatives, founded on authentic documents, or immemorial uſage, were confirmed by the Council of two hundred, in 1606, 1623, and particularly in 1716.

All affairs of government, and all debates in the national aſſemblies, are carried on in the German language; and as the French tongue is ſpoken in the greateſt part of the canton, and particularly by the gentry, there are many members of the Great Council, who do not underſtand the debates.

Such was the general form of government when I firſt viſited Friburgh in 1776; ſince that period it has undergone ſome very important alterations, the ſubſtance of which I ſhall communicate to you in the following letter.

LETTER 53.

Origin and Suppreſſion of the late Troubles in the Canton of Friburgh—Changes in the Form of Government.

THE excluſive right of ſharing in the adminiſtration of affairs, enjoyed by a certain number of families, in the ariſtocratical cantons, hath, in conjunction with other concurrent circumſtances, occaſioned revolts in thoſe of Zuric, Berne, and Lucerne, which were quelled by the intervention of the other Helvetic powers, and prevented from again breaking out, by judicious regulations. Friburgh having exhibited a recent example of the ſame kind; I have endeavoured to trace the origin and progreſs of thoſe inteſtine commotions, which have been followed by a conſiderable alteration in the form of government. Accordingly, I now lay before you the reſult of my inquiries, impartially drawn from repeated converſations with perſons of both parties; from an attentive peruſal of ſeveral publications written during the courſe of the troubles;

and

and from ſome curious manuſcripts, which it was my good fortune to obtain.

In the latter end of April 1781, an inſurrection ſuddenly broke out in the bailliage of Gruyeres, a diſtrict in the ſouthern part of the canton; the inhabitants whereof are extremely jealous of their liberties, and zealouſly attached to all the cuſtoms tranſmitted from their anceſtors. Irritated by a few impolitic acts of government, by the petty vexations of the bailifs; by the ſecularization of Val Sainte, a convent of Chartreux; by the abolition of ſeveral faſts and feſtivals; and excited by the artifices of Chenaux and Caſtellaz, two deſigning leaders, they roſe in open rebellion.

Peter Nicholas Chenaux, the chief of the ſedition, was a native of la Tour de Treme, in the bailliage of Gruyeres. This man was greatly embarraſſed in his circumſtances, and highly exaſperated againſt government, having been arreſted and impriſoned in 1771, for his diſobedient and turbulent conduct. He was in the thirty-eighth year of his age, of a good figure and expreſſive countenance; and, being a man of rude but popular eloquence, and of an overbearing ſpirit, had obtained a conſiderable influence over the artleſs inhabitants. His abettor, John Nicholas Andrew Caſtellaz, was a burgher of Fri-

burgh and advocate of Gruyeres: verſed in all the chicanery of the law, converſant in the hiſtory and antient records of his country, and well acquainted with the privileges of the people, he was the firſt to expoſe the ſlighteſt oppreſſions of the bailif, and to remark wherever government ſeemed to infringe their immunities, or iſſued edicts contrary to long-eſtabliſhed uſages. Having a loud voice, and vehement elocution, he was formed for popular aſſemblies, He was the perſon by whom Chenaux was principally directed in all difficult emergencies; he drew up the principal remonſtrances which, exaggerating every defect in the conſtitution, tended to render government odious, and to ſpread diſcontents among the people.

Theſe two leaders having, in conjunction with other accomplices, availed themſelves of the public diſſatisfaction, and engaged a conſiderable number of adherents; held, in the month of April 1781, regular meetings at Bulle. On the 24th, in particular, they inſinuated before a large aſſembly, that government had formed a deſign of impoſing additional taxes of a grievous nature, particularly on horned cattle and horſes; and even of with-holding the annual preſent of ſalt, which they ſhared with the burghers of Friburgh. They repreſented, that the ſeculariza-

tion

tion of Val Sainte, and the abolition of certain feſtivals, implied a ſettled determination to overturn the religion of their anceſtors: that the governing party had many enemies; that the deſpotiſm of the ſecret chamber was held in univerſal abhorrence; that the nobles were diſcontented, on account of their excluſion from the principal charges of the commonwealth; that the burghers and inhabitants of the twenty-four pariſhes were jealous of the exorbitant rights poſſeſſed by the ſecret burghers, to whom was excluſively confined the entrance into the great council, and of courſe into the adminiſtration of affairs, and the lucrative offices of government. They added, that the time was now arrived, when they might venture, with impunity, to petition for a redreſs of grievances; a ſtrong party in the capital was ready, on the firſt moment of their appearance, to join them; and multitudes would repair from all quarters to the ſtandard of liberty.

Having, by theſe and ſimilar inſinuations, increaſed the number of their adherents, it was finally concluded, that, on the 3d of May, they ſhould ſecretly repair to the capital, and, aſſembling in the market-place, ſhould force the arſenal; that, having provided themſelves with arms, they ſhould ſecure the garriſon, and con-

ſtrain the Great Council to redreſs their grievances, and make thoſe changes in the conſtitution, which could alone ſecure to the people a mild and juſt adminiſtration.

It is ſufficiently remarkable, that, notwithſtanding the general ferment which prevailed among the people in the bailliage of Gruyeres, and the number of perſons concerned in this conſpiracy; government received no notice of it, before the 29th or 30th of April. On the firſt certain news of the intended inſurrection, the council of war, who immediately aſſembled on the occaſion, diſpatched ſome troops to arreſt Chenaux: but he, having received information from one of his accomplices who happened to be at that time in the capital, eſcaped to la Tour de Treme; and, being joined by the moſt deſperate of his adherents, determined to take arms without delay. Having, by means of his emiſſaries, excited the ſpirit of rebellion among the people, who were informed, that Chenaux had narrowly eſcaped an arreſt for his patriotic attempts to ſecure their immunities; he ventured to repair to Gruyeres, where Caſtellaz had already collected a conſiderable party. This advocate, having aſſembled a large body during the night, expatiated, with much force and eloquence, on the ſeveral grievances, uſing various arguments

in

in favour of an immediate revolt, ſimilar to thoſe which were urged on the 24th of April. He accordingly inflamed the populace to ſuch a degree, that they flew to arms at five in the morning, and impriſoning the bailif, erected the ſtandard of rebellion. The alarm being now given, Chenaux advanced to Poſieux, which was fixed upon for the place of general rendezvous; from whence he addreſſed a letter to the magiſtrates of Friburgh, diſclaiming all deſign of having recourſe to violence, and requiring only, that the petitions and remonſtrances of the people ſhould be taken into conſideration.

On the next morning he conducted about ſixty of his partizans to a height overlooking Friburgh, with an intention of ſurpriſing the city; but finding the gates ſhut, the fortifications guarded, and not being joined, as he expected, by the inhabitants of the twenty-four pariſhes, he retired firſt to Poſieux, and afterwards to Avry, where he expected a reinforcement, which Caſtellaz and his emiſſaries were collecting in various parts of the canton.

During theſe ſeditious proceedings, the magiſtrates of Friburgh were active in making preparations for the ſecurity of the town. The council of war ſat during the whole night; a night of extreme terror and anxiety to many of the

the inhabitants. The account of the bailif's arreſt, of Chenaux's eſcape, and that he was ſtationed at Poſieux, within two leagues of the capital, with a corps of rebels whoſe number rumour exaggerated, was no ſooner divulged, than a general panic and confuſion prevailed. The garriſon ſcarcely conſiſted of more than fifty ſoldiers, and thoſe chiefly invalids; the fortifications were weak and extenſive; not more than two hundred burghers could be muſtered to defend the ramparts; and the inſurgents were ſuppoſed to poſſeſs a ſtrong party even within the walls. If in this moment of diſorder, aggravated by the darkneſs of the night, Chenaux could have attacked the town with a ſufficient force, he might have carried it by aſſault. But the firſt emotions of ſurpriſe and terror had no ſooner ſubſided, than the beſieged aſſumed a ſpirit and vigour adequate to the alarming ſituation of affairs. They all ran to arms; the nobles, burghers, and even ſtrangers crouded to the ramparts, and prepared for a vigorous defence. Their confidence was alſo raiſed by the arrival of ſome militia from Morat, who entered the gates at nine in the morning, and by the expectation of more effectual ſuccours from the canton of Berne.

On the preceding evening a meſſenger had been diſpatched to Berne, requeſting immediate aſſiſtance. He arrived in that city ſoon after midnight: the advoyer d'Erlach, in the 85th year of his age, inſtantly ſummoned the Sovereign Council. "Gentlemen," exclaimed the venerable magiſtrate, "on other occaſions you have a year to deliberate; you muſt now inſtantly act: Friburgh is beſieged by an army of rebels; let thoſe who approve ſending troops to her relief, hold up their hands." The members unanimouſly aſſenting, the aſſembly broke up; and twelve hundred troops were commanded to march without a moment's delay. Before the cloſe of the evening Major Rihimer entered Friburgh at the head of two hundred ſoldiers, who paſſed unmoleſted through flying parties of the inſurgents; at midnight a hundred and fifty dragoons arrived, and on the next morning eight hundred infantry completed the reinforcement.

The arrival of theſe troops inſpired the magiſtrates of Friburgh with perfect confidence and ſecurity, and ſaved the town from the moſt imminent danger. Nevertheleſs the emiſſaries of Chenaux and Caſtellaz, ranging about the country, ſounded the church bells in the various towns and pariſhes, exclaiming that their religion and

and liberties were threatened with immediate annihilation. The rebel forces were continually augmenting; they began to be joined by many inhabitants in the environs of the town; and the leaſt ſucceſs would have increaſed their number. Chenaux had ſeveral emiſſaries within the city, and before mid-day appeared before Friburgh at the head of above two thouſand men; eight hundred of whom were provided with muſkets, the remainder with only clubs, or the firſt weapons which chance preſented. Having occupied the heights, he found his followers wavering and irreſolute, and ſtruck with a general panic on receiving the news, that a large body of troops from Berne had reinforced the garriſon. He poſted his followers however in an advantageous ſituation, waiting with conſiderable anxiety till his forces ſhould be increaſed, and an opportunity ſhould preſent itſelf of commencing hoſtilities, or of obtaining a general amneſty for himſelf and his adherents.

In this ſituation of affairs, Major Rihimer led a detachment of a hundred and eighty dragoons from one of the gates; while lieutenant Froideville, at the head of ſeventy foot and twenty dragoons, ſallied from another. The Major, driving the beſiegers from a height which commanded the town, continued his march with an intent

intent of attacking them in front; and at the diſtance of about a cannon-ſhot, reconnoitred eight hundred of the enemy drawn up in order of battle, but without artillery. The inſurgents no ſooner obſerved the cannon planted againſt them, and perceived that the commander was an officer of Berne, than they diſpatched repeated meſſengers to aſſure him that they had no hoſtile intentions; that they were only collected to petition for a redreſs of grievances; and entreated him to ſpare the effuſion of blood. Having received an anſwer, that he would undertake to intercede in their behalf, if they would inſtantly lay down their arms, and deliver up Chenaux; they agreed to the firſt point, but refuſed the ſecond. The major continued to enforce his demand, and gained time, until lieutenant Froideville appeared unexpectedly in their rear. The two commanders repeating their promiſes, that their juſt remonſtrances ſhould not be neglected, the whole troop ſurrendered themſelves priſoners. Four of the principal ringleaders being ſecured, the remainder, having delivered in their names and places of abode, were permitted to retire without moleſtation.

Chenaux, either finding it impoſſible to excite his followers to ſuſtain the attack, or being deficient in perſonal courage, was among the firſt who

who betook himſelf to flight. Wandering from village to village, he was, about midnight, obſerved near Poſieux by Henry Roſſier, one of his principal accomplices. Roſſier, willing to ſave his own life by betraying his leader, ſeized him by the collar, reproached him for having ſeduced the people into rebellion, and for his cowardice in forſaking them; and then, with the aſſiſtance of Chavaillat and Python, two other inſurgents, took from him a double-barrelled piſtol, and was conducting him to Friburgh. Chenaux, however, ſuddenly diſengaging himſelf, drew out a knife, and, wounding Roſſier in ſeveral places, endeavoured to eſcape towards Poſieux. But Chavaillat purſuing him, and Roſſier ſnatching a muſket from one of his followers, ſoon overtook him, and ſummoned him to ſurrender under pain of inſtant death. Chenaux, finding no hopes of eſcaping, and deriving courage from deſpair, attacked Roſſier with ſuch inconſiderate fury, that he received the aſſailant's bayonet in his breaſt, and expired on the ſpot.

The death of the leader, the voluntary ſurrender of his principal aſſociates, and the flight of Caſtellaz, put an end to this ill-concerted enterpriſe. Six hundred inſurgents, the only remains of the rebels, were on the next morning obſerved hovering about the capital; but learning

ing of the fate of their leader, and the ſurrender of the other troops, and being attacked by a corps of grenadiers, they diſperſed without reſiſtance.

But although the inſurrection was thus ſuppreſſed, and all parties had concurred in chaſtiſing rebellion; yet the ſpirit of diſcontent had ſpread itſelf with too great violence and rapidity among all ranks of men, not to convince the rulers of the ſtate, that the ſeeds of the revolt lay deeper than appearances ſeemed to ſuggeſt. For it was obvious, that the petty vexations of bailifs, the abolition of unneceſſary faſts and feſtivals, and the ſeeming violation of a few trifling immunities, however exaggerated by the artifices of the moſt deſigning leaders, could never have been ſufficiently powerful to excite the people of Gruyeres to the deſperate extremity of taking arms againſt their lawful ſovereigns; if government had not been extremely unpopular; if ſeveral grievances of an oppreſſive nature had not required to be redreſſed; ſeveral odious reſtrictions to be removed; and ſeveral defects in the conſtitution to be remedied. Influenced by theſe conſiderations, government, in a manifeſto iſſued on the 11th of May, after granting a general amneſty to all the inſurgents, excepting a few of the ringleaders, found it neceſſary to invite the

ſubjects

ſubjects of all ranks and denominations to preſent remonſtrances, to make repreſentations, and to petition againſt grievances. About the ſame time the three cantons of Berne, Lucerne, and Soleure diſpatched deputies to Friburgh, offering their mediation towards compoſing the diſſentions of the republic.

In conſequence of this manifeſto, many petitions and remonſtrances were preſented to the great council, either claiming the renewal of obſolete rights, the removal of certain reſtrictions, or the abolition of various taxes; demanding redreſs of grievances, and an amendment of the conſtitution; or complaining of an infringement of popular franchiſes. As it would be needleſs to mention all the complaints and plans of amendment which were dictated by the ſpirit of party and the frenzy of innovation, I ſhall confine myſelf to three principal points of diſpute, which occaſioned the moſt violent altercations; and which would never have been compromiſed, if the three mediating cantons had not powerfully and effectually interfered: 1. The diſqualification of the nobility from the office of bannerets and *ſecrets*; 2. The exorbitant prerogatives and influence of the *ſecret chamber*; and 3. The excluſive privileges of the *ſecret* burghers.

1. With

1. With reſpect to the firſt point in agitation, it may be remarked, that the excluſion of the noble families from the charge of bannerets and of *ſecrets* appeared ſufficiently reaſonable, as long as the government was democratical, and the bannerets were, according to the antient charters, choſen from the people; and of courſe when neither they, nor their coadjutors, the *ſecrets*, could be taken from the nobility. But when the government was changed from a democracy to an ariſtocracy, and the municipal adminiſtration no longer ſubſiſted; and particularly when the troubles excited by the bannerets, in 1553, obliged the Council of two hundred to transfer from the people to themſelves the right of appointing thoſe magiſtrates; the diſqualification of the nobility, which was founded on democratical jealouſy, ought to have no longer ſubſiſted. Their remonſtrances were therefore juſt, and would have been ſtill more reaſonable, if the troubles of the republic had not rendered them dangerous.

2. As to the ſecond point in queſtion: the extenſive power and extraordinary influence of the *ſecret chamber*, could not fail to create jealouſies and diſcontents among all ranks of men. For, on conſidering the detail of their prerogatives, as laid down in the preceding letter, it

muſt appear, that although the members of that committee enjoyed no poſitive authority in enacting or annulling laws; yet by being the depoſitaries of the conſtitution, and the ultimate framers of all decrees; by having the ſole right of propoſing, and a negative on all the reſolutions of the great council, no motion could paſs without their concurrence. It is alſo no leſs obvious, that the power of making regulations for the interior adminiſtration of their own affairs, myſteriouſly concealed from the knowledge of the Sovereign Council, might give riſe to dangerous abuſes; that the members of the chamber eventually enjoyed, by the power of excluding from all charges, that of nomination; that by appointing to the vacancies in their own body it was to be feared, what in effect happened, that an admiſſion into the *ſecret chamber* would be chiefly confined to a few families; that, as they filled up all the elections in the Council of two hundred, theſe elections would depend entirely upon a few perſons who poſſeſſed the greateſt credit; and that thus the government would gradually but neceſſarily tend to a narrower oligarchy.

3. The third point in debate, namely, the excluſive privileges of the *ſecret* burghers, opened a much

much larger and more dangerous field of contention. The demand of the other burghers that, according to the antient form of government, the right of being elected into the Great Council, and conſequently a ſhare in the adminiſtration of affairs, inſtead of being excluſively confined to the *ſecret* burghers, ſhould be alſo extended to them; ſeemed to militate againſt the fundamental laws of the republic, and to involve a total change in the very eſſence of the conſtitution.

The remaining part of the year was employed in agitating theſe points of diſpute; which gave riſe to many political and hiſtorical diſcuſſions, and occaſioned ſeveral curious reſearches into the origin of the *ſecret chamber*, and the riſe of the diſtinction between the *ſecret* and other burghers.

For the purpoſe of aſcertaining theſe queſtions, the popular party demanded acceſs to the archives; but met with delays and refuſals on the part of government, which conſidered ſuch an inquiry as of dangerous tendency, and calculated to introduce factious innovations in the ſtate.

Exaſperated by repeated refuſals, the populace began to ſhew ſigns of diſcontent, and to aſſem-

ble in great crowds at the place where Chenaux was put to death: they marched in ſolemn proceſſion, bearing croſſes and colours, and chaunting hymns and *requiems* in honour of this *martyr* (as they called him) to the religion and liberties of his country. Theſe tumultuous meetings would probably have ended in another inſurrection, if the biſhop of Lauſanne had not forbidden them, under pain of excommunication. Towards the concluſion of the year, the deputies from Berne, Lucerne, and Soleure, arrived at Friburgh, for the purpoſe of compoſing the differences ſubſiſting in the capital. Theſe deputies, in order to conciliate the burghers, who were no leſs violent in favour of the nobles than in extending their own immunities, prevailed upon adminiſtration to repeal the diſabling clauſe. With reſpect, however, to the other ſubjects of controverſy; as they conceived it dangerous to entruſt the leaders of a heated populace with the records of government, which might be attended with projects of endleſs innovation; they propoſed, that the Great Council ſhould order a committee to draw up a declaration ſetting forth the privileges and franchiſes of the burghers; and that for the future this declaration ſhould be conſidered as a fundamental code.

But

But although theſe eſſential points were obtained, yet ſo many ſubjects of altercation ſtill remained, that for ſome time all further plans towards finally compoſing the differences were fruitleſs. The deputies repaired to Morat, where they were employed, from the 25th of April 1782 to the 25th of July, in hearing appeals, reviſing and conſidering the arguments on both ſides, and conſulting on the beſt methods to conciliate the two parties.

So greatly however were the burghers diſſatisfied with the chiefs of the ariſtocracy, that they formed a reſolution to refuſe taking the annual oath of allegiance to the Great Council; nor were they without great difficulty prevailed upon, by the three deputies in perſon (who repaired to Friburgh for that purpoſe) to perform the uſual homage. Diſpleaſed, nevertheleſs, with the deputies themſelves, and conſidering them as too partial to adminiſtration, they delivered a memorial; in which, after repreſenting their grievances, they threatened to appeal to the general diet of the thirteen cantons aſſembled at Frauenfield.

A meaſure of ſo alarming a nature, and tending to produce a very material change in the principles of the Helvetic Union, was reprobated in the ſtrongeſt manner by the mem-

bers of that confederacy. For it was urged (and with great reaſon) that by introducing an innovation of ſuch public notoriety, the diſputes between the reſpective governments and their ſubjects would be liable to become more numerous and dangerous; and that in the end each canton would fall under the guardianſhip of the remainder. On the other hand, what rendered the preſent criſis of affairs ſtill more alarming was, that the court of France, conſulted by ſeveral leading members in adminiſtration, had offered her good offices towards compoſing the diſſenſions. And although the three cantons had, with conſiſtent dignity, declared againſt the intervention of any foreign power, and that Friburgh, on accepting ſuch a mediation, ſhould be excluded from the Helvetic Confederacy; yet it was to be apprehended, that on an increaſe of the troubles, the French would find ſome pretext to interfere in the affairs of Friburgh, as they were actually engaged in thoſe of Geneva: and "woe upon that republic," ſaid the aſſertors of Swiſs independence, "in whoſe internal politics foreign powers interpoſe."

Influenced by theſe conſiderations, the three mediating cantons, anxious to bring matters to a ſpeedy concluſion, prevailed upon the ruling party to conſent to ſeveral alterations in the conſtitution.

ſtitution. At length, after various delays, diſputes, and conferences, the deputies publiſhed, on the 19th of June, a manifeſto, declaring, that on an impartial and diligent review of the various memorials and manifeſtos on both ſides, the aſſertions of the burghers were groundleſs, and their demands unconſtitutional; that the preſent form of government had ſubſiſted above two hundred years; and that the ſupreme authority reſided in the members of the Great Council. To this declaration they added, that the three cantons would defend and protect the exiſting form of government, and would never permit an appeal relating to the amendment or alteration of the conſtitution, to any other power than the ſupreme council of the republic, *that* tribunal being alone competent to ſuch queſtions.

At the ſame time they recommended to the government a repeal of the diſabling clauſe, which excluded the nobility from the office of banneret or *ſecret*; to admit ſome new families into the *ſecret* burgherſhip; to hear and redreſs any remaining grievances; and to correct any defects in the conſtitution.

This declaration, being accepted by government, was read, on the 28th of July, to the burghers aſſembled in their reſpective tribes; but ſeveral among them proteſting formally againſt

it, the three principal ringleaders of this oppoſition were baniſhed, their proteſts diſregarded, and tranquillity was reſtored to the republic.

Soon after this final pacification, the Great Council paſſed ſeveral acts for the redreſs of grievances, removed ſome burdens and uſages which had been the object of general complaint, and amended the conſtitution in the following points,

1. A perfect equality is eſtabliſhed between the *ſecret* burghers; the antient nobles are no longer diſqualified from holding the office of bannerets or *ſecrets*, but do not enjoy any precedence in conſequence of their titles, which in all acts and deeds within the canton of Friburgh are omitted. In return, all the *ſecret* burghers are, without diſtinction of perſons, eſteemed equally noble.

2. Sixteen new families have been admitted into the *ſecret* burgherſhip, which addition nearly completes the number of a hundred families; and it is further enacted, that on the extinction of any three families, an equal number of families ſhall be elected without delay.

3. The vacancies in the ſixty, inſtead of being indiſcriminately ſupplied from the members of the two hundred at large, are now filled up according to ſeniority.

4. But the great and principal alteration in the form

form of government, reſpects the new conſtitution of the *ſecret chamber*; which is changed in the following important points.

1. The members of that committee, inſtead of being nominated by a majority of voices in their own body, are now taken from the ſixty, and choſen by *blind ballot*. The candidates are no longer under the neceſſity of being preſented by a member of the *ſecret chamber*; but, on addreſſing themſelves to their banneret, the latter is obliged to deliver in their names to the *ſecret chamber*. As each vacancy is ſupplied from the particular tribe in which it happens, this alteration muſt neceſſarily reduce the candidates to three or four: in order, alſo, to prevent cabal or corruption, if there ſhall be only one candidate, he is not neceſſarily elected; but it muſt be decided by lot, whether he ſhall be choſen or rejected; and if there ſhould be a majority of ballots for the negative, he muſt wait till the ſubſequent year, before he can have another chance of being appointed. Each member, on his election, ſhall pay no more than £. 1. 10 *s.* to each banneret and *ſecret*; and the money ſhall be delivered to the ſecretary, and by him be equally diſtributed. 2. Neither father and ſon, nor two brothers, nor more than two perſons bearing the ſame name, ſhall be admitted at the ſame time into

into the *ſecret chamber*. 3. The members ſtill retain the right of filling up all the vacancies in the Council of two hundred, with the uſual proviſions, that the candidates ſhall be twenty years of age; and that the promotion ſhall take place every two years. It is further decreed, that, on oath, under pain of deprivation, no more than 1200 crowns * ſhall be received for the nomination; and that the ſaid ſum, inſtead of being ſolely appropriated to the perſon who is to appoint, ſhall now be delivered to the ſecretary, to be by him equally diſtributed among the four bannerets, when either of them ſhall elect, or among the members of the *ſecret chamber*, belonging to the tribe in which there is a vacancy, when the turn devolves upon either of them †. It is moreover added, that if the perſon preſented by a banneret, or a *ſecret*, ſhall be rejected by two-thirds of the chamber, another may be preſented; but if the ſecond is rejected, the right of preſentation ſhall be transferred to the banneret, or *ſecret*, next in rank of the ſame tribe. It is alſo ſtipulated on oath, that all promiſes of exchanging preſentations, or ſimilar engagements, ſhall not

* Of 25 bach each, the whole ſum £. 171. 13 *s.* 10 *d.*

† Each banneret to nominate the firſt vacancy in his own tribe, and then each *ſecret* by rotation, according to ſeniority, in his particular tribe.

be

be valid for the future; thoſe only excepted, which are now abſolutely ſubſiſting, and which concern either a ſon of the contracting party, or a perſon whoſe name is ſpecified. 4. The power of excluding perſons from the principal charges of government, is ſtill reſerved to them; but they are exhorted to uſe it with great precaution and care. 5. The interpoſition of a negative, exerciſed by a ſingle banneret, is no longer ſufficient to reject a motion in the great council. The oppoſition, in order to render it valid, muſt now be founded on a preciſe law, and unanimouſly approved by the four bannerets: but if one ſhall diſſent, it is then referred to the Council of two hundred, which ſhall decide, by a majority of two-thirds, whether the negative ſhall be confirmed or rejected. 6. The power of propoſing, formerly veſted only in the *ſecret chamber*, is now extended to the members of the Little Council and the ſixty; and the mode of deliberating on ſuch propoſitions and motions, is attended with forms more or leſs complicated, as the object is more or leſs important. In all inſtances the laws are prepared and finally drawn up by the ſecret chamber. 7. The *ſecrets* ſhall take an oath before the bannerets as delegates of the Great Council, to obey all the ordinances of that aſſembly, and to obſerve the preſent articles,

without retrenching or adding to them. And it is further ordered, that no alterations ſhall be made in the preſent conſtitution of the *ſecret chamber*, unleſs approved by three-fourths of their own body, and by two-thirds of the Great Council.

LETTER 54.

Cheeſe of Gruyeres—Hermitage near Friburgh.

THE canton of Friburgh contains a ſmall portion of arable land, but abounds in paſtures; and, accordingly, its principal articles of exportation conſiſt in horned cattle, cheeſe, butter, and hides.

The cheeſe, well known under the name of Gruyeres, which is exported in ſuch large quantities, is made in a chain of mountains about ten leagues in length and four in breadth, extending from the bailliage of Schwartzenburgh to the diſtricts of Vevay and Aigle in the canton of Berne,

Berne. All the cheeſes, though made in the ſame manner, are not of the ſame quality; a difference probably ariſing from the diverſity of the ſoil, the ſame plants not growing at all heights; and the lower paſtures, called *gites*, being not in ſuch high eſtimation for their goodneſs as thoſe in the moſt elevated ſituations.

The whole diſtrict is divided into greater or leſſer farms, which the proprietors let out in leaſes of three or ſix years, at the annual rate of 16 *s.* to £. 1. 10 *s.* during five months for each cow, according to the nature or elevation of the ground: the lower paſtures, though not of the beſt quality, are the deareſt, becauſe being ſooner free from the ſnow, and later covered with it, they afford food to the cattle for a longer time.

Each farmer, having rented a mountain, hires from the different peaſants in the canton from forty to ſixty cows, from the 15th of May to the 8th of October: he pays at the rate of from £. 1. 6 *s.* to £. 1. 13 *s.* 6 *d.* per head; and each cow upon an average yields from twenty to twenty-four quarts of milk per day, and ſupplies two hundred pounds * of cheeſe during the five months. On the eighteenth of October the

* Each pound contains ſeventeen ounces and a fraction.

farmer

farmer reſtores the cows to the different proprietors. The cattle are then paſtured in the meadows which have been twice mowed, until the 10th or 11th of November, when, on account of the ſnow, they are uſually removed to the ſtables, and fed during winter on hay and after-graſs.

As the mountains in the canton of Friburgh afford paſture for at leaſt 15,000 cows, it may be eſtimated that they annually ſupply about 30,000 hundred weight of cheeſe fit for exportation; beſide 2,000 or 3,000 on their return from the mountains, excluſive of a thinner ſort, which is made in various parts of the canton. The cheeſes fit for exportation weigh from forty to ſixty pounds each, and are ſold from £. 1. 17 s. to £. 2 per hundred weight. Beſide the cows which are paſtured during ſummer in the mountains, the canton contains about 12,000 belonging to the ſeveral landholders, which ſupply their families with milk.

The buildings neceſſary for making the cheeſes conſiſt of a *chalet* or cottage, which contains a room with a furnace for the purpoſe of boiling the milk, a cellar where the milk is preſerved, and a ſtable for ſixty or ſeventy cows; near it is a kind of dairy-room, kept in an equal degree of temperature, where the cheeſes are every day turned

turned and ſalted. The thickneſs of the vat, in which each cheeſe is preſſed, is about four inches. The caſks for exportation contain ten cheeſes, excepting thoſe deſtined for Italy, which hold only three, in order to be conveyed by mules acroſs the Great St. Bernard. The cheeſes well packed up bear the tranſport into the moſt diſtant countries; they ought to be kept in a damp place, and frequently waſhed with white wine, for the purpoſe of preſerving them from inſects. When the cows return from the mountains, a ſpecies of cream cheeſe is made in autumn, and even in winter; it is much eſteemed, and is dearer than that of Gruyeres.

The greateſt part of the ſalt uſed on theſe occaſions is drawn from Franche Comté, a ſmall quantity from Lorraine and Bavaria, but its quality is much inferior. The conſumption of the whole canton, for all purpoſes, is at leaſt 20,000 hundred weight, of which 15,000 is drawn from Franche Comté.

A great number of mares, foals, and horned cattle, are annually raiſed in the canton: the oxen of three or four years old are ſold in the canton of Berne, in the country of Neuchatel, and in Franche Comté. Upon an average it may be eſtimated that the canton of Friburgh annually

annually ſupplies paſture for 37,000 cows and oxen.

In our route to Berne, we made a ſmall circuit to the village of Neuneck, in order to ſee an hermitage, that lies about a league from Friburgh; and which has been highly extolled by travellers on account of its ſingularity. It is formed in the ſolid rock; and the chief curioſity conſiſts in its having been the work of two men: as ſuch, it is an aſtoniſhing performance, but, in any other reſpect, is ſcarcely worth viſiting. In the laſt century a hermit ſcooped out a hollow in this rock, juſt ſufficient to lie at his full length: but his ſucceſſor deſiring a more commodious manſion, hewed, in the heart of the mountain, a chapel, ſeveral apartments, and ſtair-caſes. The length of the whole is above four hundred feet. One room is ninety feet long, and twenty broad; the ſteeple of the chapel, if it may be ſo called, is eighty feet high, and the chimney of the kitchen ninety.

The hermit who perforated this dwelling in the rock, was near thirty years engaged in the work. What a waſte of time and induſtry! But ſuch is the folly of ſequeſtered ſuperſtition, that, for want of better occupations, it frequently has recourſe to laborious trifles. The ſituation of this

hermitage

hermitage is beautiful: the rock in which it is cut, hangs over the river Sane, which meandering between two chains of hills covered with wood, fills all the valley beneath. The preſent hermit is a German; and with him lives an old ſoldier.

From this hermitage to Neuneck (at which place the canton of Berne commences) the country is rich, and finely wooded; on our right we had a diſtant but ſublime view of the moſt rugged rocks, the ſnowy alps riſing above them and cloſing the proſpect. The ſun was now declining: the various tints of the evening—the purple gleam upon the naked rocks—and the rays of the ſetting-ſun upon the glaciers, which ſeemed to glow almoſt into tranſparency—caſt ſuch a beautiful radiance over this magnificent ſcene, as even the luminous pencil of Apelles himſelf, who is ſaid to have painted "*quæ pingi non poſſunt*, "*fulgura & fulgetra**," would in vain have attempted to imitate.

I am, &c.

* Vid. Plin. H. N. lib. 35. c. 10.

LETTER 55.

Town and Canton of Berne.

Berne, Sept. 16.

I WAS very much ſtruck, upon my entrance into Berne, with its ſingular neatneſs and beauty. The principal ſtreets are broad and long, not ſtrait, but gently curved: the houſes are moſtly uniform, built of a greyiſh ſtone upon arcades. Through the middle of the ſtreets runs a lively ſtream of the cleareſt water, in a ſtone channel, while ſeveral fountains are not leſs ornamental to the place than beneficial to the inhabitants. The river Aar almoſt ſurrounds the town, winding its courſe over a rocky bed much below the level of the ſtreets; and for a conſiderable way forming by its ſteep and craggy banks a kind of natural rampart. The cathedral, a noble piece of Gothic architecture, ſtands upon a platform raiſed at a great expence from the bed of the river, and commands a moſt extenſive view. The adjacent country is richly cultivated, and agreeably diverſified with hills, lawns, wood, and

wate

water; the river flows rapidly below, and an abrupt chain of rugged and ſnow-capt alps bounds the diſtant horizon. Such an aſſemblage of wild and beautiful objects would in any place preſent a moſt ſtriking proſpect; but its effect becomes greatly heightened when ſeen from the midſt of a large town.

According to the native hiſtorians, Berne was built by Berchtold the Fifth, duke of Zæringen; and was, from its foundation, an imperial city. Upon the death of Berchtold in 1218, the emperor Frederic the Second conferred upon the inhabitants conſiderable privileges, and compiled alſo a code of legiſlation, which forms the baſis of their preſent civil laws. The liberty which this city enjoyed, attracted many inhabitants from the adjacent country, who found a ſure aſylum from the oppreſſion of the nobles. Although Berne from its firſt foundation was engaged in perpetual wars with its neighbours, and for ſome time with the houſe of Auſtria; yet it continued to aggrandiſe itſelf by degrees, and conſiderably to enlarge its territory. In the year 1353, Berne acceded to the Helvetic confederacy; and poſſeſſed ſuch great power, even at that early period, as to obtain the ſecond rank among the Swiſs cantons. Since the acquiſition of the Pays de Vaud,

the domains of this canton form nearly the third part of Switzerland, and about the fourth of the actual population: it contains about 370,000 ſouls, excluſive of 11,000 in the capital. At the introduction of the reformation in 1528, government acquired a large increaſe of revenue by ſecularizing the eccleſiaſtical poſſeſſions. At the ſame period, the whole canton followed the example of the capital; and the reformed religion was permanently eſtabliſhed.

The canton is divided into two great diviſions; the Pays de Vaud and the German diſtrict. The Pays de Vaud having been conquered from the houſe of Savoy, and the German diſtrict from the ſtates of the empire; juſtice is adminiſtered, and the taxes regulated in thoſe two provinces by laws and cuſtoms peculiar to each. Each of theſe diviſions has its treaſurer and chamber of appeal reſident in the capital: the chamber of appeal belonging to the Pays de Vaud, judges in the laſt reſort; but the inhabitants of the German diſtrict may again appeal from theirs to the Sovereign Council.

At Berne the ſociety is extremely agreeable, and foreigners are received with great eaſe and politeneſs. The men do not meet in ſeparate ſocieties; and the women are the life and orna-

ment of their daily aſſemblies. Theſe aſſemblies begin about four or five in the afternoon, and continue till about eight, when the parties retire to their reſpective houſes.

Dancing is a very frequent amuſement at Berne. There is a public ball every fortnight; and in winter ſcarcely an evening paſſes without one. Theſe diverſions commence at ſo early an hour as five in the afternoon, on account of a ſtanding order from government, which prohibits their continuance after eleven. Engliſh country dances are commonly introduced; but the *waltze* (which is a ſpecies of allemande) the favourite dance of the natives, is moſt common. The parties arrange themſelves in diſtinct couples, and follow each other in a circular direction, the gentleman turning his partner with great velocity. The life and ſpirit of their dances ſtrike a foreigner with aſtoniſhment, and can ſcarcely be conceived by thoſe who have never ſeen them. The gaiety of theſe parties is ſtill more enlivened during the ſummer months, when the natives reſort to a garden near the town, and dance under an open pavilion amid ſcenes of rural feſtivity. The foreigner who prefers the conſtant intercourſe of company to a more tranquil ſociety, will chuſe the reſidence

of Berne rather than that of any other town in Switzerland.

There is but little trade in the capital: ſome few manufactures indeed (chiefly of linen and ſilk) have been eſtabliſhed; but are carried on by thoſe only, who have no proſpect of being admitted into the Sovereign Council. For, thoſe families who enjoy any influence in public affairs, would hold themſelves degraded, by engaging in any branch of commerce; and as offices of the ſtate, except bailliages, are in general not very profitable, nor indeed numerous, many of them enter, as their ſole reſource, into foreign armies. One general advantage, however, is derived from this anti-commercial ſpirit: the members of government not being intereſted in laying reſtrictions on trade, do not, as at Zuric and Baſle, confine the excluſive right of eſtabliſhing manufactures to the burghers of the capital; but wiſely extend that permiſſion to all their ſubjects, without diſtinction of rank or place. From this circumſtance, in conjunction with the mildneſs and wiſdom of government, ariſes that comfortable ſtate, and even wealth, which ſo peculiarly diſtinguiſhes the peaſantry in the whole canton of Berne; and to the natural reſult of theſe wiſe regulations may be reaſonably

imputed

imputed the attachment to government particularly obſervable in the German diſtrict.

It is worthy of remark, that the peaſants, who have acquired opulence either by manufactures or agriculture, ſeldom quit their ſituation; they continue in the ſame habits which they contracted in the earlier period of life, and, however wealthy, never give their daughters in marriage but to perſons of their own deſcription.

The public buildings are conſtructed in a noble ſimplicity of ſtyle, and announce the riches and grandeur of the republic. The arſenal contains arms for ſixty thouſand men, and a conſiderable quantity of cannon, which are caſt in the town. The granary, an excellent inſtitution, ſimilar to that of Zuric, always contains a large proviſion of corn, ſupplied in conſequence of particular treaties by France and Holland.

The charitable inſtitutions of Berne are numerous, liberal, and well directed. The hoſpitals are in general large, clean, and airy; and, in the alms-houſe for the reception of fifty poor citizens, is a curious eſtabliſhment ſimilar to one which I noticed at Baſle. Diſtreſſed travellers are treated with a meal and a lodging, if at night, and receive ſix-pence on their departure.

If ſick or wounded, they are maintained till their recovery is eſtabliſhed.

The houſe of correction, which, when the benevolent Mr. Howard viſited Berne, was in ſo deplorable a ſtate, is now extremely well regulated, and reflects great honour on Mr. Manuel, member of the Great Council, to whoſe care and attention this ſalutary change is chiefly owing. Formerly all delinquents, without diſtinction of crime, were confined in the ſame place; but they are now ſeparated; and two houſes are eſtabliſhed; one called the Houſe of Correction for greater crimes, and the other the Houſe of Labour for ſmaller miſdemeanors. The priſoners are alſo diſcriminated by the appellations of *brown* and *blue* from the colour of their clothes, with which they are ſupplied gratis during the term of their confinement. The brown colour is appropriated to the houſe of correction, the blue to the houſe of labour. The men and women are lodged in ſeparate apartments. Both are conſtantly employed, ſometimes in cleaning the ſtreets, and other ſervile occupations; at other times they are taught to read and write, and are inſtructed in various trades, which may aſſiſt them in gaining a maintenance at the expiration of the time for which they were ſentenced to hard labour. By theſe means

means the expence of the eſtabliſhment is nearly ſupported; and an honeſt livelihood aſſured to thoſe who would otherwiſe prove uſeleſs or pernicious members of ſociety.

There are four tables, at which the reſpective ſeats are a mark of diſtinction appropriated to good behaviour, and a larger or leſſer ſhare of proviſion is diſtributed to each in proportion to their induſtry. After having earned their food, the priſoners in the houſe of labour receive ten per cent. thoſe in the houſe of correction eight per cent. for their extra work.

Public juſtice is wiſely and impartially adminiſtered; and the torture, which had for ſome time fallen into diſuſe, is now formally aboliſhed by a public act of government. This humane and juſt act forms a diſtinguiſhed æra in the hiſtory of Swiſs juriſprudence; as the example of ſo powerful and wiſe a government cannot fail producing a general influence; and it is to be hoped, will be the prelude to its abolition throughout Switzerland.

The ſolemnity uſed in paſſing capital ſentence on a criminal, deſerves to be mentioned and imitated. The trial being finiſhed, the priſoner is informed of his condemnation by the *Grand Sautier*, or lieutenant of the police, and attended by two clergymen, who prepare him for death.

On

On the day appointed for execution, a large ſcaffolding, covered with a black canopy, is conſtructed in the middle of the principal ſtreet. The advoyer, with a ſceptre in his hand, is ſeated on an elevated kind of throne between two ſenators, and attended by the chancellor and the lieutenant of the police, holding an iron ſtick, called the *rod of blood*, all habited in their official robes. The criminal being brought to the foot of the ſcaffolding without chains, the chancellor reads aloud the ſentence of condemnation, at the concluſion of which the advoyer bids the executioner approach. The latter inſtantly binds the arms of the culprit, and leads him to the place of execution.

The public library is a ſmall but well-choſen collection, and contains 20,000 volumes, a cabinet of Swiſs coins and medals, and many curious manuſcripts: of theſe, Mr. Sinner, a man of great erudition, has publiſhed a judicious catalogue. He has not only ſet forth their titles, and aſcertained their age, but has alſo given a general and ſuccinct account of their reſpective ſubjects; and from many has publiſhed extracts equally curious and intereſting. Among theſe MSS. are ſome of the thirteenth century, conſiſting of ſeveral ſongs and romances of the Troubadours, written in that and the preceding ages,

ages, which merit the attention of thoſe who are converſant in that ſpecies of antient poetry.

Learning is neither ſo univerſally encouraged, nor ſo ſucceſsfully cultivated here as at Zuric; the academical ſtudies are almoſt ſolely directed to thoſe branches of knowledge more eſſentially neceſſary for entering into the church. The ſociety for the promotion of agriculture, is almoſt the only eſtabliſhment that directly tends to the progreſs of the arts and ſciences; and meets with no great countenance from government.

POSTSCRIPT.

October 1786.

I FEEL a very ſenſible ſatisfaction on adding, that this enlightened government no longer merits the reproach of not ſufficiently encouraging the arts and ſciences. It is now awakened from its former lethargy, and begins to perceive that it is the intereſt of every wiſe government to eſteem and protect the ſciences. The magiſtrates have lately purchaſed and appropriated a large manſion for the public library; increaſed the collection of books; and procured from England an extenſive apparatus of experimental philoſophy.

Among

Among other undertakings which meet with their encouragement, a new map of the canton is now preparing under their auſpices, by the profeſſor of experimental philoſophy, a great *deſideratum* in the geography of Switzerland, as the alps of the canton are unfaithfully delineated in all the maps which have fallen under my obſervation. I am alſo happy to add, that the Reverend Mr. Wyttenbach has lately inſtituted a literary ſociety for the promotion of phyſics and natural hiſtory in general, and that of Switzerland in particular. In January 1788, this ſociety conſiſted of ten members reſident at Berne, of whom ſeveral poſſeſs, and others are forming, collections agreeable to the plan of the inſtitution. The members have eſtabliſhed regular correſpondence in various parts of Europe, and are ready to anſwer the inquiries of foreign naturaliſts, who wiſh to be informed concerning any points which relate to the natural hiſtory of this country. An inſtitution founded on ſuch liberal and extenſive principles, and having one object principally in view, cannot fail to render the moſt eſſential ſervice to ſcience.

I am, &c.

LETTER 56.

Government of Berne.

WERE I to attempt entering into an exact diſquiſition concerning the government of Berne; my letter would not only exceed its proper limits, but would hardly be contained within the extent of an ordinary pamphlet. I am perſuaded, therefore, you will readily excuſe me from putting your patience to ſo tedious a trial: but you would probably think me very inconſiſtent indeed, if, after having already deſcended into leſs intereſting details, I ſhould paſs over in ſilence a government, the wiſdom of whoſe adminiſtration is ſo juſtly admired. Let me endeavour then to ſketch the general outlines of this conſtitution.

The ſovereign power reſides in the Great Council of two hundred; which when complete conſiſts of two hundred and ninety-nine members, choſen from the citizens; from whom they are conſidered as deriving their power, and as acting by deputation. The authority with which they

they are inveſted, is in ſome reſpects the moſt abſolute and uncontrouled of any among the ariſtocratical ſtates of Switzerland. The government of Lucerne is called, indeed, the moſt ariſtocratical of all the cantons; and it may be ſo, perhaps, with reſpect to the ſmall number of families, to which the adminiſtration of affairs is entruſted: but no war can be declared, no peace concluded, no alliance made, no taxes impoſed, without the conſent of the burghers in a general aſſembly. At Friburgh and Soleure the burghers are likewiſe convened upon particular occaſions. Whereas the Great Council of Berne, ſince 1682, when it was declared the ſovereign, is reſtrained by no conſtitutional check of this kind; as a general aſſembly of the citizens is never convened on any occaſion.

The executive powers of government are delegated by this Sovereign Council to the ſenate, choſen by themſelves from their own body: the former aſſembles ordinarily three times a week, and extraordinarily upon particular occaſions; the ſenate every day, Sundays excepted.

The ſenate, compriſing the two advoyers, or chiefs of the republic, is compoſed of twenty-ſeven members; and from this ſelect body are drawn the principal magiſtrates of the commonwealth.

wealth. On a vacancy in the ſenate, the mode of election is as follows: — Twenty-ſix balls, three of which are golden, are put into a box, and drawn by the ſeveral members: thoſe who draw the three golden balls, nominate three electors out of their body. In the ſame manner of balloting, ſeven members are choſen from the Great Council, who alſo nominate ſeven electors out of their own body. Theſe ten electors fix upon a certain number of candidates, not exceeding ten, nor leſs than ſix; and thoſe among theſe candidates, who have the feweſt votes in the Sovereign Council, retire, till their number is reduced to four: then four balls, two golden and two ſilver, are drawn by the four remaining candidates; the two who draw the former are put in nomination, and he who has the greateſt number of ſuffrages in the Sovereign Council, is choſen. But in order to be eligible, the candidate muſt have been a member of the Great Council ten years, and muſt be married, or a widower.

The Great Council is generally filled up every ten years; as within that period there is uſually a deficiency of eighty members to complete the whole number of two hundred and ninety-nine: a new election can only be propoſed on a vacancy of eighty; and cannot be deferred when there is

is a deficiency of a hundred. The time of election being determined by vote, each advoyer nominates two of the new members; each seizenier, and each member of the ſenate, one each: two or three other officers of ſtate enjoy the ſame privilege. A few perſons alſo claim, by virtue of their offices, a right of being elected: and their claim is generally admitted. Theſe ſeveral nominations and pretenſions, commonly amount, in the whole, to about fifty of the new members: the remaining vacancies are ſupplied by the ſuffrages of the ſenate, and the ſeizeniers.

The *Seizeniers* are ſixteen members of the Great Council, drawn yearly from the abbayes or tribes; two from each of the four great tribes, and one from each of the remaining eight. The candidates are generally * taken from thoſe who have exerciſed the office of bailifs; and are elected by lot. Every year during three days at

* I ſay *generally*, becauſe it is not abſolutely fixed, that all the ſeizeniers muſt have been bailifs: for if it happens, that in one tribe there are two perſons, one of whom has been a bailif, and the other is a member of the Great Council; they draw lots for the charge. And ſhould a member of the Great Council be the only one of his tribe, he becomes ſeizenier of courſe, provided he is eligible. In order to be ſeizenier, the candidate muſt be married, or a widower, and have neither his father or brother in the ſenate.

Eaſter,

Eaſter, all other employments in the ſtate are ſuſpended, except thoſe of the bannerets and the ſeizeniers, who, during this ſuſpenſion, are inveſted with a power ſimilar to that of the Roman cenſors. In caſe of mal-adminiſtration, they may remove any member from the Great Council, or from the Senate: but it is a power which they never exerciſe; and ſhould they think proper to exert it, the ſentence muſt be confirmed by that council.

The principal magiſtrates are, two advoyers, the two treaſurers, and the four bannerets: they are each of them choſen by a majority of voices in the Sovereign Council, and are yearly confirmed in their reſpective offices. The advoyers hold their poſt for life; the treaſurers, ſix years; and the bannerets, four. At Eaſter the advoyer in office delivers up his authority, in full council, to his colleague. The *reigning* advoyer ſits on an elevated ſeat, under a canopy, and the ſeal of the republic lies upon the table before him. He never delivers his opinion except it is demanded; he enjoys no vote unleſs the numbers are equal; and in that caſe, he has the caſting voice. The advoyer out of office, is the firſt ſenator in rank, and preſident of the ſecret council.

The two treaſurers, one for the German diſtrict, and the other for the Pays de Vaud, form, in conjunction with the four bannerets, an œconomical chamber, or council of finances: this council examines and paſſes the accounts of the bailifs, and receives the revenues of all thoſe who are accountable to government. The four bannerets, together with the advoyer out of office, the ſenior treaſurer, and two members of the ſenate, compoſe a committee or ſecret council; in which all ſtate affairs, that require ſecrecy, are diſcuſſed.

I have only deſcribed theſe eight magiſtracies, as being the chief offices of the ſtate, and exerciſed by members of the Senate. But although the general form of this conſtitution is entirely ariſtocratical; and the Senate poſſeſſes a very conſiderable influence; yet it does not enjoy that almoſt excluſive authority, which is obſervable in many ariſtocratical governments. For, by ſeveral wiſe and well-obſerved regulations, the Sovereign Council, although it delegates the moſt important concerns of government to the Senate, yet aſſembles, at ſtated times, and ſuperintends the adminiſtration of public affairs.

It may alſo be remarked, that although the antient houſes retain very conſiderable influence, and are more readily entruſted with the admini-

ſtration of affairs; yet that the principal charges of government are not excluſively confined to them; many new families being always admitted into the Sovereign Council on every election. It muſt nevertheleſs be acknowledged, that, as the citizens are continually diminiſhing, and their vacancies are never ſupplied; it would well become ſo wiſe a government to receive occaſionally new families into the burgherſhip, in order to prevent the ill effects ariſing from the partial and narrow ſpirit of too confined an oligarchy. Government is adminiſtered throughout its ſeveral departments with great preciſion, and every ordinance is executed with as much diſpatch as in a monarchical ſtate. The adminiſtration of affairs is carried on with great wiſdom and moderation, and the rulers are particularly cautious not to encroach upon the privileges of the ſubject.

The canton of Berne is divided into a certain number of diſtricts, called bailliages; over which, bailifs are choſen from the Sovereign Council: and, theſe poſts being the moſt profitable in the diſpoſal of government, are the great objects of general purſuit. Formerly the bailifs, taken indifferently from the Senate or Great Council, were nominated by the bannerets; but as this method rendered the members entirely

dependent upon thoſe who had the chief credit and influence in the commonwealth; the mode of election was altered in 1712, and they are now choſen by lot. No competitor, however, can be received as a candidate, in oppoſition to a more antient member of the Great Council: for inſtance, he who was admitted in 1766, cannot ſtand againſt one who was choſen in 1756. None but married men or widowers are capable of being elected into this office; nor can any perſon occupy more than once the principal bailliages: thoſe of a leſs valuable kind may be poſſeſſed three times.

The ſeveral bailifs are repreſentatives of the ſovereign power in their reſpective diſtricts. They enforce the edicts of government, collect the public revenues, act as juſtices of the peace, and are judges in civil and criminal cauſes, except where there is any local * juriſdiction. In civil cauſes, beyond a certain value, an appeal lies to the courts of Berne: in criminal affairs, the proceſs is made out in the bailif's court, undergoes a reviſion in the ſenate, and is referred to the criminal chamber, which inflicts puniſhment

* The lord of the eſtate of Dieſbach enjoys, within his own lands, the ſame powers, in criminal affairs, as are poſſeſſed by the bailifs in their reſpective diſtricts.

for

for ſmall miſdemeanors. In capital caſes, the ſentence muſt be confirmed by the Senate, and by the Sovereign Council, if the delinquent is a citizen of Berne. The bailif delivers his accounts to the œconomical chamber, to which court an appeal lies, in caſe of exaction, either on the part of the bailif, or of his officers: and with reſpect to thoſe miſdemeanors that are puniſhable by fine, and of which the bailif is entitled to a ſhare; the proportion of the reſpective penalties is ſettled by the legiſlature with the moſt ſcrupulous exactneſs, and not left to the arbitrary deciſion of an intereſted judge.

Although from all theſe conſiderations it ſhould ſeem, that every poſſible precaution has been taken by government to prevent the extortions of the bailifs; yet inſtances have not been wanting to prove, that theſe wiſe and ſtrict regulations may be eluded: but it is no leſs certain, that where bailifs have been guilty of oppreſſions, frequent examples occur of their being impartially and ſeverely puniſhed.

The profits of this office ariſe from the produce of the demeſnes, of the tythes, and certain duties paid to government in the reſpective bailliages. In ſome parts of the German diviſion, the bailif is entitled, upon the death of every peaſant, to a determinate part of the in-

heritance: although his ſhare is very inconſider-able, yet in ſome ſituations it may prove an oppreſſive tax upon the family. This tax is the only inſtance that has fallen under my knowledge, where the peaſants of this canton are liable to any impoſition, which can juſtly be deemed grievous.

Although there are no ſtanding armies in Switzerland; yet in many of the cantons, and particularly in Berne, the militia is ſo well regulated, that government could aſſemble a very conſiderable body of men at a moment's warning. To this end, every male at the age of ſixteen is enrolled in the militia; and about a third of the whole number are formed into particular regiments, compoſed of fuſileers and electionaries; the former conſiſting of batchelors, and the latter of married men. Every perſon thus enrolled, is obliged to provide himſelf, at his own expence, with an uniform, a muſket, and a certain quantity of powder and ball: and no peaſant is allowed to marry, unleſs he produces his uniform and arms. Every year a certain number of officers, who are called Land Majors, are deputed by the council of war, throughout the canton, to inſpect the arms of the ſoldiers; to complete the regiments, and exerciſe the militia:

litia: upon their return they make their report to that council. Beſide this annual review, the regiments are occaſionally exerciſed by veteran ſoldiers, appointed for that purpoſe.

Beſide the arms in the arſenal of Berne, a certain quantity is alſo provided, in the arſenal of each bailliage, ſufficient for the militia of that diſtrict; and likewiſe a ſum of money amounting to three months pay, which is appropriated to the electionaries in caſe of actual ſervice. The dragoons are choſen from the ſubſtantial farmers; as each perſon is obliged to provide his horſe and accoutrements. In time of peace, the advoyer out of office, is preſident of the council of war, and a member of that council is commander of the militia in the Pays de Vaud; but during war a general in chief is nominated, who commands the forces of the republic.

A certain number of regiments being thus always in readineſs, ſignals are fixed on the higheſt part of each bailliage, for aſſembling the militia at a particular place in each diſtrict; where they receive orders for marching.

Before I cloſe this letter, I ſhall juſt mention an inſtitution called the *Exterior State*, as

remarkable for its ſingularity as its utility. It is a model of the Sovereign Council, and is compoſed of thoſe burghers, who have not attained the age requiſite for entering into that Council. It has a Great Council, a Senate, two advoyers, treaſurers, bannerets, and ſeizeniers; all of whom are choſen in the uſual manner, and with the accuſtomed ceremonies. The poſt of advoyer in this mimic community is ſolicited with great aſſiduity, and ſometimes obtained at a conſiderable expence; as the ſucceſsful candidate is always admitted into the Great Council, without any farther recommendation. This body poſſeſſes a certain number of bailliages, which conſiſt of ſeveral ruined caſtles diſperſed over the canton: it has alſo its common treaſure, and its debts. In this latter article, however, it by no means reſembles the actual government of Berne, which is not only free from debts, but poſſeſſed of a very conſiderable fund in reſerve.

This remarkable inſtitution, may be conſidered as a political ſeminary for the youth of Berne. It renders them acquainted with the forms of the conſtitution; and, as the members debate upon all kinds of political ſubjects, affords them an opportunity of exerciſing and improving their talents, and by that means of becoming

becoming more capable of ſerving the public, whenever they may be admitted to a ſhare in the adminiſtration of government.

I am, &c.

LETTER 57.

Biographical and Literary Anecdotes of Haller.

BERNE has produced few men highly eminent in literature; but has eſtabliſhed her glory in being the birth-place of the celebrated Haller.

Albert Haller *, the youngeſt of five brothers, was

* The materials for this biographical ſketch, are chiefly collected from the following lives of this great man, which, as I was informed, by his eldeſt ſon, ſince deceaſed, are thoſe to which moſt credit may be given. 1. *Leben des Herrn von Haller*, by George Zimmerman. Zuric, 1755. The author was the diſciple and friend of Haller. 2. *Lobrede auf Herrn Albrecht von Haller, von Herrn von Baltha-ſar.*

was born on the 16th of October 1708. His father, Emanuel Haller, a citizen of Berne, practiſed the law as an advocate with great ſucceſs;

far. Baſel, 1778. The author was Haller's intimate friend, and was well acquainted with the principal events of his life. He is the ſame gentleman whom I have mentioned in vol. i. Letter 23. 3. *Lobrede auf Herrn Albert Haller.* Durch, V. B. *Tſcharner des Groſſen Raths, &c.* Berne, 1778. Mr. Tſcharner, being a native of Berne, and an intimate acquaintance of Haller, his account deſerves implicit credit. He was author of ſeveral eſteemed works on the topography and hiſtory of Switzerland. He died in 1778, a ſhort time after he had pronounced this panegyric on his deceaſed friend. 4. *Eloge Hiſtorique d'Albert de Haller, avec un Catalogue de ſes Oeuvres.* Geneve, 1778. Sennebier, the writer of this eulogium, is well known as the learned author of *Bibliotheque de Geneve,* and of *Hiſtoire Literarie de Geneve.* He informs us, that he had received ſeveral anecdotes from the family of Haller.

Many other panegyrics and lives of Haller have been publiſhed in various parts of Europe; but as they were moſtly written by thoſe who were not perſonally acquainted with him, I have not cited them as authorities. His ſon mentions nineteen lives and panegyrics of his father, that had fallen under his notice in 1784. See Bibl. Schweit. Geſhic. vol. ii. N° 882—906. I have been enabled to add ſeveral anecdotes which I procured at Berne, and from his eldeſt ſon the late bailif of Nyon.

The completeſt liſt of Haller's works is to be found in the 6th volume of "*Epiſtolæ ad Hallerum ſcriptæ.*" Berne, 1775. His ſubſequent publications may be ſupplied from Sennebier's catalogue.

and

and in 1713, removed from the capital to Baden, where he was appointed ſecretary of that bailliage.

Although many accounts are uſually related concerning the early genius of diſtinguiſhed perſons, which do not always deſerve implicit credit; yet the premature abilities and application of Haller are inconteſtably proved. When he had ſcarcely attained his fifth year he was accuſtomed to write the new words, which he recollected to have heard in the courſe of the day. His progreſs in the languages was ſo rapid, that in his tenth year he could tranſlate from the Greek, and compoſed for his own private uſe a Chaldaic grammar, a Greek and Hebrew lexicon. His paſſion for letters was alſo ſo general and ardent, that, about the ſame period, he abridged from Bayle and Moreri an hiſtorical dictionary, compriſing above two thouſand lives, and diſtinguiſhed himſelf by a ſatire in Latin verſe againſt his preceptor Abraham Baillodz, a perſon of conſiderable learning, but of a capricious and moroſe diſpoſition.

Such unwearied application, and ſuch aſtoniſhing progreſs, in a youth of his years, ought to have enſured the approbation and encouragement of his family. On the contrary, his father, who had deſtined him to the law, reproved his growing

growing taſte for polite literature, was particularly offended at his inclination for poetry, as likely to draw him from the ſeverer occupations, and objected to the variety of his purſuits as too deſultory and ſuperficial. He did not conſider, that, during childhood, the principal requiſite of education is to infuſe a taſte for application in general; and, that when the baſe of education is rendered as broad as poſſible, it may always, like a pyramid, be reduced to a point. But neither his father's repeated exhortations, nor his preceptor's ſevere admonitions, could oblige the youth to confine his ſtudies to one object, or check his inſatiable thirſt for general information.

In this manner he was educated until 1721, when, on his father's death, he was removed to the public ſchool at Berne. He was placed in a claſs far above his age; and uſually wrote in Greek the exerciſe, which he was expected to compoſe in the Latin tongue.

In 1723, he obtained permiſſion to accompany a young friend to Bienne, in order to be inſtructed in philoſophy by the father of his companion, who was a celebrated phyſician. But his new preceptor being a bigot to the Carteſian ſchool, Haller ſoon rejected with diſdain that logic and philoſophy, which tended to cramp

cramp his genius rather than extend his knowledge; and continued to cultivate hiſtory, poetry, and polite literature, but with as little order and method as might be expected from his years.

Haller, during his reſidence at Bienne, began a cuſtom, which he afterwards followed through life, that of writing his opinion of the books which he peruſed, and making large extracts from them. His genius being alſo awakened by the romantic ſcenery of the country to poetical enthuſiaſm, he compoſed various pieces in the epic, dramatic, and lyric ſtyles. He was at this time ſo entirely abſorbed in this favourite ſtudy, that, on a fire breaking out in the houſe in which he reſided, he ruſhed into his apartment, and reſcued his poetry from the flames, leaving his other papers, with little regret, to deſtruction. Afterwards, when a more mature age had ripened his judgment, he was frequently heard to ſay, that he had preſerved from the flames thoſe compoſitions which he then thought the fineſt productions of human genius, in order at a future period to conſign them to deſtruction as unworthy of his pen *.

In

* Many of his biographers have confounded theſe two facts; and, from a natural proneneſs to exaggeration, have aſſerted,

In this period of life, Haller compares himſelf to a wild plant, which is left to grow without pruning; and this very circumſtance was probably the principal cauſe of his future proficiency, and the foundation of that univerſal knowledge, to which he afterwards attained.

He had been originally intended for the law: but his active mind could not ſubmit to follow a profeſſion which would limit his inquiries; which entirely depended on precedent and authority; and which, to uſe his own quotation from Horace, in a letter to his friend Bonnet, obliged him,

Jurare in verba magiſtri.

aſſerted, that at Bienne, Haller, with a greatneſs of mind above his years, burned his poetical compoſitions, from a ſtrong conviction, that poetry tended to alienate his mind from the ſeverer ſtudies: whereas, the very contrary happened. He ſaved his poetical pieces in preference to his other papers, and burned them afterwards, becauſe they would have diſgraced his reputation: although, as juvenile productions, they were not wholly without merit. I have in this inſtance preferred the authority of his particular friends, Balthaſar and Tſcharner, to his other biographers, who had not ſuch opportunities of obtaining the truth. Beſides, as a confirmation of their evidence, Haller did not intermit his poetical ſtudies; and wrote at Tubingen his *Morgen-gedanken* and *Sehn-Sucht*, which are the earlieſt ſpecimens he ever gave to the public.

And

And although he could not ſubmit to the ſhackles of that narrow philoſophy, ſo ſtrongly recommended and enforced by his new preceptor, yet he appears to have been principally determined by his advice to dedicate himſelf to phyſic; the ſtudy of which comprehends ſuch a variety of literary purſuits, as ſeemed congenial to the zeal and activity of his capacious mind. He had no ſooner formed this reſolution, than he adopted a more regular and uniform plan, than he had hitherto been able to purſue. For this purpoſe he removed, towards the end of 1723, to the univerſity of Tubingen, where he proſecuted his ſtudies with that unwearied application, which never forſook him, under the profeſſors Elias Camerarius and Du Vernoy. From Camerarius he learned thoſe ſound principles of rational philoſophy, which teach us firſt to doubt, and afterwards to believe; and which are as far removed from credulity on one hand, as from ſcepticiſm on the other. From the lectures of Du Vernoy he imbibed his firſt taſte for botany, and made ſo rapid a progreſs in the ſtudy of anatomy, that his maſter predicted, from ſeveral diſſertations, his future proficiency in that line. Notwithſtanding, however, his ſtrong and invariable attachment to theſe two branches of natural hiſtory, he repreſents himſelf as ſtudying,

incitâ

invitâ minervâ, againſt nature; anatomy though he could not ſupport bad ſmells, and botany though he was extremely ſhort-ſighted. At Tubingen he alſo diſtinguiſhed his knowledge in mineralogy by refuting the error of Tournefort, in aſcribing to foſſils a vegetating power.

During his continuance in that univerſity, he gave an inſtance of his early controul over his paſſions; a difficult conqueſt for a young man of ſtrong feelings and lively imagination. A ſingle deviation into exceſs, into which he had been hurried by the example of ſome of his fellow-pupils, ſo greatly affected a perſon like him, no leſs enamoured of virtue, than ſuſceptible of ingenuous ſhame, that he inſtantly formed a reſolution to abſtain from wine; and adopted a ſtrictneſs of morals, which renders highly probable the aſſertion of his French encomiaſt, the Marquis de Condorcet, that he was deſcended from a family, in which piety might be ſaid to be hereditary.

In 1725, Haller repaired to Leyden, to which place he was drawn by the great reputation of Boerhaave. Here he found a more ample field for a diſplay of his abilities, and the improvement of his mind. He became the favourite ſcholar of Boerhaave, by whoſe example and encouragement he ſtrengthened his growing inclination

clination for botany. He noted down his maſter's lectures on the *Inſtitutes of Medicine* with ſuch preciſion, as afterwards gave birth to one of his moſt-uſeful publications. He continued his anatomical ſtudies under Albinus, juſt then riſing into fame, and the venerable Ruyſch, who ſo highly improved the art of injecting anatomical preparations.

The precarious ſtate of his health, probably occaſioned, or at leaſt increaſed, by his intenſe application, induced him to accompany two of his countrymen through part of Germany. On his return, in 1726, he received his doctor's degree, though only in the nineteenth year of his age; and publiſhed on that occaſion his inaugural diſſertation *de Ductu ſalivali Coſchwiziano.*

In 1727 he viſited England, was favourably received by Cheſelden, Douglas, and Sir Hans Sloane; and improved his knowledge of medicine and ſurgery under the auſpices of thoſe celebrated men, and by diligently attending the hoſpitals.

At Paris, whither he next directed his courſe, he ſtudied botany under Geoffroy and Juſſieu; anatomy under Le Dran and Winſlow, a celebrated ſurgeon. Winſlow was indeed his favourite maſter, to whom he particularly attached

himſelf; whom he propoſed to his diſciples as the beſt model for their imitation, as an anatomiſt, who, ſhackled by no ſyſtem, deſcribed ſimply and faithfully what he himſelf obſerved in his diſſections.

Haller had propoſed to continue his travels to Italy, that country where medicinal knowledge firſt revived in the darker ages, and where,

"*Smit with the love of ſacred ſong,*"

he might indulge his enthuſiaſm and improve his taſte in claſſical literature. The uncertain ſtate of his health, the *maladie du pays* which ſo remarkably affects the Swiſs in foreign parts, and on which he has compoſed a poem, together with the advice of his friends, prevailed over his inclination, and induced him to return to his native country.

In his way to Berne he ſtopped at Baſle, in order to ſtudy mathematics and algebra under the celebrated John Bernoulli; and in this, as well as every other inſtance of his life, applied with ſuch indefatigable perſeverance, as if thoſe ſciences were to form the ſole object of his future reſearches. His proficiency in theſe ſtudies is ſufficiently proved by ſeveral treatiſes ſtill extant in manuſcript, which he compoſed on arithmetic and geometry, and particularly by his remarks

marks on the Marquis de l'Hoſpital's Analyſis of Infiniteſimals; and his attachment to them by his being deeply employed in a profound calculation on the day of his marriage. But though he made ſuch a progreſs as aſtoniſhed Bernoulli himſelf, he continued his other purſuits, being appointed to read lectures on anatomy during the ſickneſs of the profeſſor: while he fulfilled the duties of that office, he alſo attended the lectures of Tzinger on the practical parts of medicine; thus at the ſame time diſplaying, with equal propriety, the dignity of a profeſſor, and the humility of a pupil.

During the ſummer of 1729, he, in company with his friend John Geſner, made an excurſion into the mountains of Switzerland; an excurſion rendered memorable by its ſuggeſting to him the plan of a *Flora Helvetica*, and by inſpiring his poem on the Alps, which he compoſed in the 21ſt year of his age; a poem as ſublime and immortal as the mountains which are the ſubject of his ſong.

Not to interrupt theſe biographical anecdotes with a chronological detail of his poetical productions, I ſhall juſt mention, that, not long after his poem on the Alps, he wrote his ethic epiſtles, on the Imperfection of Human Virtue, on Superſtition and Infidelity, on the Origin of Evil, on the Vanity of Honour, Various

Satires, Doris, a Paſtoral on his firſt wife, and his much admired Elegy on her death. It is a convincing proof of Haller's verſatile genius and extraordinary mental powers, that he ſhould have ſo eminently excelled in poetry, which, except in his early youth, he never conſidered otherwiſe than as an amuſement, either to ſooth him under afflictions, and in the bed of ſickneſs, or to conſole him for the envy and neglect of his contemporaries.

The ſoundeſt German critics place Haller among the moſt eminent of their poets; and conſider ſublimity as the grand characteriſtic of his writings. They acknowledge, that he improved the harmony and richneſs of his native tongue; that he poſſeſſed the higheſt powers of invention and fancy; great originality both in his ideas and language; that he is the true colouriſt of nature; that he ſounded the depths of metaphyſical and moral ſcience; that he equally excels in pictureſque deſcriptions, in ſoft and delightful imagery, in elevated ſentiments, and philoſophical preciſion. A few ſupercilious critics have reproached his poetry with occaſional obſcurities; and accuſe him of having introduced a new language affectedly averſe to the common modes of diction. Cold criticiſm may cenſure; but twenty-two ſucceſſive editions of his German poems,

poems, and the tranſlation of them into the principal languages of Europe, prove, that they poſſeſs the great aim of poetry, that of pleaſing and intereſting the reader. And it may be remarked with truth, that although Haller's ſtupendous labours in erudition and ſcience render his poetical talents of inferior account; yet that if he had confined himſelf to poetry, that alone would have immortalized his name.

But it is time to follow Haller to his native city, where he returned, in 1729, expecting from his countrymen that reſpect and patronage, he had ſo liberally received abroad. He had, however, the mortification to experience that neglect, and even envy, to which every man of genius is expoſed in his own country, and which he ſeems to have augmented by his ſatirical compoſitions.

He continued three years without having the intereſt to procure any public employment; and, though he prevailed on Government to eſtabliſh an anatomical theatre, and gave lectures gratis; yet he did not ſucceed in obtaining the place of phyſician to the hoſpital, which he much deſired. He alſo ſolicited a profeſſorſhip, and was again repulſed. He ſeems to have ſenſibly felt theſe diſappointments, and expreſſed his impatience and indignation in his ſatirical poems. Inſtead,

however, of damping his activity or abating the ardour of his genius, he redoubled his application and ſervices in order to force himſelf into public notice.

The firſt diſtinguiſhing tribute to his literary talents was paid by the Royal Society of Upſala, which, in 1735, choſe him a member. This election was the prelude to more honourable and beneficial employments. In the ſame year his countrymen at length acknowledged his merit, by appointing him director of an hoſpital and public librarian. In the former ſituation he diſtinguiſhed himſelf by his zeal and humanity; in the latter, he beſtowed great pains in arranging the library, and in forming the firſt catalogue. Scarcely any branch of literature, however remote from his uſual occupations, was omitted by Haller, whenever an opportunity preſented itſelf, either of improving his general knowledge, or of being uſeful to ſcience. Finding in the public library a collection of antient medals, which had been hitherto neglected; he took conſiderable pleaſure in claſſing them. His love of hiſtory led him to pay great attention to the ſtudy of medals, which he juſtly conſidered as the moſt authentic documents of hiſtorical truth, and the moſt certain monuments to aſcertain the ever-fluctuating ſtate of language.

His

His literary reputation began now to ſpread itſelf by various botanical, anatomical, and medical publications, and by a collection of poems*, which firſt made its appearance in 1732.

At length, in 1736, he received, unſolicited on his part, the offer of the profeſſorſhip of phyſic, botany, and ſurgery, in the univerſity of Gottingen, newly eſtabliſhed by George the Second. Notwithſtanding, however, all the advantages and honours which accompanied this offer, he, for ſome time, heſitated whether he ſhould accept it. He had, in 1731, eſpouſed a young lady of good family, whoſe great beauty and accompliſhments were rendered ſtill more endearing by her affectionate ſubſerviency to his manner of life. She had brought him three children; and theſe ties attached him more ſtrongly to his native place, where his merits had procured him many ſincere friends; and the air of which he conſidered as in ſome reſpect neceſſary for the continuance of his health. On the contrary, the honour of being invited by ſo great a monarch, the dignity of the eſtabliſhment to which he was called, and the conſideration of having a more ample theatre for the improvement of his knowledge, induced him to remove to Gottingen.

* *Verſuch Schweitzeriſcher Gedichte.* The beſt edition is printed at Berne, 1775.

He quitted, however, Berne with much regret; preſaging, as it were, the heavy ſtroke which overtook him ſoon after his arrival in that univerſity. He loſt his wife. The death of his beloved Marianne, whoſe memory he has celebrated in a pathetic elegy, afflicted him ſo deeply, that it almoſt brought him to the grave. In this criſis of deſpondency he redoubled his application, as the moſt probable means of ſubduing his ſorrow; and the duties of his ſtation forced him from the contemplation of his own grief into public life.

During ſeventeen years, in which he reſided at Gottingen, where his abilities expanded in proportion as his opportunities of acquiring knowledge increaſed; he obtained from government the eſtabliſhment of a botanical garden, which he ſuperintended, of an anatomical theatre, a ſchool for midwifery, and a college for the improvement of ſurgery. He formed the plan for a Royal Society of Sciences, of which he was appointed perpetual preſident.

The comprehenſive mind and verſatile genius of Haller, united with his unremitting diligence and ardour in all his purſuits, enabled him to cultivate with uncommon ſucceſs, a variety of knowledge. Had not the great Swede preoccupied the field, it is probable, that Haller

would have ſtood the firſt among his contemporaries as an improver of botanical knowledge *. Yet botany was not among his earlieſt purſuits, for he informs us, that he had made no advances in it until his return from his travels: during his reſidence at Baſle, in the year 1728, as if inſpired, he ſays, by the genius of that place, which had nurtured the Bauhins, and where at that period botany was ſucceſsfully cultivated by Staehlin, he laid the deſign of his future Flora. From this time he made annual journeys into various parts of Switzerland, and principally among the Alps. He cultivated the correſpondence of the moſt eminent botaniſts; particularly with Scheutzer, Ludwig, Linnæus, Van Royen, and Dr. John Geſner of Zuric, who had alſo meditated a deſign to publiſh a Swiſs Flora, and freely communicated his materials to Haller.

His eſtabliſhment at Gottingen afterwards enlarged his views and opportunities; and at length, in 1742, his great botanical work on the plants of Switzerland, the reſult of fourteen

* I ſhould not have preſumed to have given any detailed account of Haller's botanical, medical, or anatomical works, if I had not received aſſiſtance on theſe ſubjects from my very judicious friend Dr. Pulteney.

years ſtudy, made its appearance. It was entitled, *Enumeratio Methodica Stirpium Helvetiæ*, in 2 vols. folio. It was the moſt copious Flora the world had ever ſeen, compriſing 1,840 ſpecies, and was enriched with ſeveral advantages, that rendered it ſingularly acceptable. The preface contains a compendious geographical deſcription of Switzerland, and of the Alps particularly; an account of all the authors who had written on the plants of that country; the recital of his own journies; acknowledgments to thoſe who had aſſiſted him; concluding with the order and method he means to purſue in this work.

After the preface follows a chronological account of 268 volumes, which he cites in the work, each accompanied by a general character; in which, with great candour and impartiality, he points out the merit or demerit of the author, in the manner which he afterwards purſued in the *Methodus Studii Medici*, and in the *Bibliotheca Medicinæ*. This is in reality a very uſeful and entertaining part of his work, inaſmuch as it forms almoſt a hiſtory of the progreſs of the ſcience, from the time of Brunfelſius to his own.

He next delineates his own ſyſtem of botany, according to which the plants are diſpoſed.

* Throughout

Throughout this great work, Haller is entirely an original: not ſatisfying himſelf with giving the deſcriptions of former writers; he appears every where to have deſcribed the plant himſelf, and to have formed new genera, and commonly new ſpecifical characters for the whole, accommodated to his own ſyſtem. He informs us, that it was his cuſtom to write down the natural characters of each plant on the day he found it.

In treating on each ſpecies, he has not only added a moſt copious number of ſynonymes, but, unſatisfied with Bauhin's Pinax, he appears to have conſulted all the old authors, extricated their ſynonymes, with uncommon diligence and ſingular diſcrimination, and arranged them, as much as poſſible, in chronological order; a method highly worthy of imitation, as it exhibits at one view, a brief hiſtory of the plant, by pointing out the firſt diſcoverer, and the regions of its growth. This, to the curious botaniſt, is a very meritorious part of Haller's labour. To each is ſubjoined a ſummary account, from the beſt writers, of the qualities and uſes, both œconomical and medical. The work is embelliſhed with plates of ſome rare ſpecies, remarkable for their exactneſs and delicacy.

Having,

Having, in 1741, obtained from the king of Great Britain the eſtabliſhment of the phyſic garden at Gottingen, Haller publiſhed the following year a catalogue of its plants. This was but a ſmall volume, but the liſt ſerved to ſhew the diligence with which he had fulfilled the intention of the royal founder. In 1753 he much enlarged it, and comprehended the plants ſpontaneouſly growing in the environs, eſpecially thoſe of the Black Foreſt. He informs us, that this volume was the production of a three months vacation, and laments, that the importance of his other avocations prevented him from fulfilling his intention of deſcribing the plants of Germany at large.

This little work is curious, ſince it exemplifies his ſyſtem as extended to exotics, of which the new and rare kinds are herein deſcribed. But the ſmall ſize of the volume precluded the introduction of the generical characters.

In 1745, he gratified the botaniſts by a new edition of the *Flora Jenenſis* of Ruppius; and, that he might do juſtice to his author, he took a journey to Jena, where he gained acceſs to the papers and *hortus ſiccus* of the author. He prefixed to this book anecdotes of this extraordinary man; and, by reforming the whole, and augmenting it with many plants, diſcovered by himſelf,

himſelf, he in ſome meaſure made it a *Flora Germanica.* Theſe performances were by no means the termination of his botanical labours. On his return to Switzerland he continued his diſcoveries in this branch of natural hiſtory; he alſo ſent, at his own expence, perſons properly qualified into the leſs frequented parts of Switzerland.

The reſult appeared in a new edition of the *Enumeratio,* which however was ſo much improved and altered, that he conſiders it as a new work. It was publiſhed in three vol. fol. in 1768, under the title of *Hiſtoria Stirpium indigenarum Helvetiæ, inchoata.* The ſubject is arranged in his own method, with the alteration however, of inverting the order of the claſſes, beginning with the *Compoſitæ,* or the *Syngeneſia* claſs of Linnæus, and ending with the *Cryptogamia,* which ſtood firſt in the *Enumeratio*; both of which are objectionable, as ſubjecting the ſtudent to the moſt difficult parts of the ſyſtem at his entrance on the ſtudy. Several intereſting particulars of the former publication are alſo omitted in theſe volumes, of which curious botaniſts will much regret the loſs: for, though he has inſerted, with enlargement, the phyſical geography of Switzerland, together with the account

count of thoſe authors who had previouſly inveſtigated the plants of the country, and has recited his own excurſions for that purpoſe; yet he has not introduced the critical catalogue of the authors, ſatisfying himſelf with giving a bare liſt of all the botanical writings, from the time of Theophraſtus to the year 1768. It is ſtill more to be regretted, that Haller has ſuppreſſed, in this edition, a great number of ſynonymes under each plant; inſerting only a few of thoſe of later date. It may further be remarked, that although in all poſſible inſtances he has introduced the ſynonymes of Linnæus, yet he has, unfortunately for ſuch as uſe the works of both, omitted the trivial names; a circumſtance which renders his book much leſs uſeful to thoſe who are converſant in the ſexual ſyſtem. Yet, if theſe are defects, they are doubtleſs more than compenſated, by the innumerable improvements made in the deſcriptions, both of the genera and ſpecies, by the great addition to the number of plants, which are extended from 1840 to 2486, of which more than 800 are of the Cryptogamia claſs; Haller having, after Micheli, beyond any of his contemporaries, enlarged the order of Fungi, of which he tells us, he had the paintings of more than 400 ſpecies drawn under his own

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inſpection. It is not, however, ſurpriſing, that Switzerland ſhould produce a greater variety of vegetables than the middle parts of Europe; when we reflect that the alpine ſituations afford growth to the plants of the arctic regions, and the warm vallies of the ſame country, to many of thoſe common to ſouthern. The value of this edition is much enhanced by enlarging the obſervations on the uſes of plants; and by referring to his authorities for what is not his own, with his accuſtomed accuracy. As an acceſſion to this work, it may be added, that the author has, in the notes, under each genus, introduced the plants of Theophraſtus and Dioſcorides, in as many inſtances as they admit of being aſcertained.

Few botaniſts have laboured more than Haller; and yet his diſcoveries in botany occupied only a comparatively ſmall portion of his time.

To ſuch as feel not, in the fulleſt extent, that enthuſiaſm which the love of ſcience creates, it may appear a paradox to aſſert, that the diſſection of human bodies could be a pleaſurable employment; yet Haller, in 1742, pronounced an elegant and ſpirited eulogium, in the univerſity of Gottingen, to prove it; and his zeal in the purſuit

purſuit of anatomical diſcoveries was attended with uncommon ſucceſs. He ſeems early to have apprehended, that the knowledge of the diſtribution of the arterial ſyſtem, had not kept pace with that of the bones, muſcles, nerves, and viſcera, which had been ſeparately and ably treated by men of eminence. Haller, therefore, wiſhed to illuſtrate more perfectly this part of the human body; and he gave to the world a more complete ſyſtem on the ſubject than had yet appeared. He publiſhed the firſt part of this great work in 1743, and the laſt in 1756. His tracts on other parts of anatomy, when collected in 1768, form three vols. in 4to. The curious reader may ſee an enumeration of his many diſcoveries in anatomy and phyſiology, at the head of the ſixth volume of his Phyſiology: and although ſome of theſe diſcoveries may have been conteſted by his contemporaries; yet his unalienable right to moſt of them, and the light particularly which he threw upon incubation, oſſification, irritability, and ſeveral other parts of the animal œconomy, will unqueſtionably ſecure to him a large and honourable ſhare of fame with poſterity.

Haller's emoluments augmented as his merits were diſplayed; and honours flowed upon him

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from all quarters. He was elected, in 1748, into the Royal Society of Stockholm, into that of London in 1749, and in 1754 choſen one of the eight foreign members in the Academy of Sciences at Paris. In 1739 he was appointed phyſician to George the Second, and king's counſellor in 1740. In 1749 the emperor Francis conferred on him letters of nobility at the requeſt of George the Second; and about the ſame time the king, in a viſit which he paid to the univerſity, diſtinguiſhed Haller with particular marks of approbation: an honour which the author gratefully acknowledges, in an Engliſh publication, intitled, "A ſhort Narrative of the King's Journey to Gottingen," and in the dedication to George the Second, prefixed to his edition of Boerhaave's *Methodus Studii Medici.*

He declined, in 1745, an invitation to Oxford, which would probably have terminated in his nomination to the profeſſorſhip of botany, vacant by the death of the celebrated Dillenius; a ſecond from the univerſity of Utrecht; and, in 1750, a third from the king of Pruſſia, with the offer of a very conſiderable penſion.

But of all his promotions, none gave him more real ſatisfaction, than his election into the

Great Council of Berne, as it enſured to him a retreat accompanied with dignity, and probably with emolument, in his native city, to which he looked forward with affection and attachment.

At length, in 1753, induced by the precarious ſtate of his health, by the deſire of removing from Gottingen, which he called the *grave* of his wives, and by his earneſt anxiety to dedicate the remainder of his days to the ſervice of his country, he took a journey to Berne, in order to procure an eſtabliſhment, which, though not adequate to his preſent appointments, might place him in the boſom of his beloved Switzerland. Soon after his arrival, he fortunately obtained by lot the office of Amman: although this office was of ſmall emolument, yet, as it might be conſidered a prelude to future appointments, and as it gave him an immediate opportunity of ſerving his children, he reſigned his profeſſorſhip at Gottingen, and ſettled at Berne. Such was the general joy of his countrymen on this event, that Morikoſof ſtruck a medal to commemorate his return.

Having formed this reſolution, he could not be ſhaken by the moſt ſplendid offers. He declined, in 1755, the preſſing invitation of Frederic

Frederic the Second, to ſuperintend the academies of Pruſſia, and to accept the chancellorſhip of the univerſity of Hall, vacant by the death of Wolfe. In 1767, he rejected the offer of a very advantageous and honourable ſettlement at St. Peterſburgh, made by Catharine the Second; and, in 1770, the ſtill more dignified promotion to the chancellorſhip of the univerſity of Gottingen, with a very conſiderable appointment; although George the Third wrote not only to Haller, but to the Senate of Berne, requeſting their influence to perſuade his acceptance of it.

His grateful country rewarded this diſintereſted attachment with the moſt liberal and unbounded confidence, and employed his talents in the public ſervice.

In 1757, he was ſent to reform the academy of Lauſanne; and, in the following year, was deputed by the Senate to examine ſome curious remains of antiquity lately diſcovered at Culm. About the ſame time he was appointed director of the ſalt-works at Bex and Aigle, with an annual ſalary of £. 500. During the term of this appointment, which continued ſix years, he reſided at La Roche.

In this retirement, he employed himſelf in

ſuperintending and improving the ſalt-works, of which he has given a ſhort account; in making occaſional excurſions into the neighbouring country, which he has likewiſe deſcribed; but more particularly diſtinguiſhed his retreat by preparing and publiſhing his great work on phyſiology.

Notwithſtanding the amplitude and ſucceſs of Haller's labours in the various branches of medical knowledge, it was, however, principally on phyſiology, which ſeems to have been his peculiar delight, that he diſplayed the whole force of his genius, and that he founded his merit as an *inventor* in ſcience.

His Outlines of Phyſiology, or *Primæ Lineæ Phyſiologicæ*, publiſhed at Gottingen in 1747, delineate the plan, and were the prelude to his immortal work, which he modeſtly ſtyles *Elementis* only, or *Elementa Phyſiologiæ corporis humani*, in eight volumes in quarto, which ſucceſſively made their appearance from 1757 to 1766.

In conformity to Boerhaave's plan, this part of the ſcience of phyſic is here emancipated from theoretical ſubtlety, from the ſhackles of metaphyſical, mechanical, and chymical hypotheſes, with which, for ages, it had been incumbered;

bered; and, for the firſt time, built on the true baſis of anatomical knowledge.

It will be ſufficient to obſerve, that the exquiſite knowledge which he has diſplayed in relation to the ſtructure of the human body, his indefatigable reſearches into the facts and opinions of all his predeceſſors, the judicious ſelection of them to eſtabliſh his own, his ſkill in comparative anatomy, the extent of his own diſcoveries, and the application of the whole to illuſtrate the uſe of the parts in the human frame, afford ſuch an inſtance of learning, induſtry, penetration, and genius, as will undoubtedly tranſmit the author's name to poſterity among the greateſt contributors to uſeful knowledge.

On his return to Berne he was elected member of the chamber of appeal for the German diſtrict, of the council of finances, of the committees for matrimonial affairs, and for improving the ſmall livings in the French diſtrict of the canton: he was alſo appointed perpetual aſſeſſor of the Council of Health, with an annual ſalary of about £. 100, as a token of his country's gratitude for having declined ſo many ſplendid offers from foreign courts, and for preferring his native place to the advancement of his fortune.

In theſe ſeveral offices he performed eſſential ſervices to the ſtate, by promoting the moſt uſeful inſtitutions, propoſing neceſſary alterations, and in framing new laws and ordinances. In his capacity of aſſeſſor to the Chamber of Health, he was particularly uſeful in forwarding the moſt important regulations; ſuch as the prohibition of empirics, the recovery of drowned perſons, and the means to prevent the ſpreading of the infectious diſtemper then prevalent among the cattle in various parts of Europe.

He alſo ſhewed himſelf a friend to humanity, by the zeal with which he aſſiſted in obtaining from government a public eſtabliſhment for orphans, by his activity in providing it with a fund, and by drawing up the plan. As a member of the Œconomical Society, he laboured much to improve the ſtate of agriculture, and made many experiments conducive to that end. In the meetings of the Great Council he delivered, on important occaſions, his opinion with a manly freedom and lively eloquence, the reſult of the ſoundeſt judgment and the moſt feeling heart.

In 1766, and the following years, this great man, who had hitherto enlightened ſcience from his cloſet, diſplayed in the theatre of public life

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the more active and diſtinguiſhed parts of a patriot and politician. He re-eſtabliſhed the harmony and ſettled the diſputes between the Vallais and the canton of Berne by a ſucceſsful negociation in which he fixed the new boundaries of the two ſtates; he was aſſociated with the moſt enlightened characters of the republic in terminating the diſſentions of Geneva; he drew up the principal diſpatches to the court of Verſailles on the ſubject of the changes which had been projected at Verſoi, on which occaſion he held a perſonal conference with the French ambaſſador; and was employed to prepare the plan of a treaty, which the canton of Berne contracted with the Elector of Bavaria relating to the purchaſe of ſalt.

On the concluſion of theſe public employments, Haller, who had now attained the ſixty-ſecond year of his age, withdrew himſelf from the buſtle of life, and lived in a more retired manner, fulfilling the duties of a father, a citizen, and a magiſtrate; and, although his health gradually declined, yet his activity ſtill remained undiminiſhed.

He reſumed his literary labours, which had been neceſſarily interrupted amidſt his other more important avocations. He publiſhed, in 1768,

his hiſtory of Swiſs plants, mentioned above; and, in 1771, the firſt part of his *Bibliotheca Medicinæ*, or his Medical Library.

No part of Haller's writings affords a more ſtriking example of the value of early and perſevering induſtry, than this publication. That habit which he had formed, ſo early as from the eighteenth year of his age, of noting his opinion of books and authors, neceſſarily accumulated a conſiderable maſs of materials; and thus enabled him afterwards to turn them to very uſeful purpoſes.

By theſe means the foundation of his *Medical Library* was laid, even before he gave the improved edition of Boerhaave's *Methodus Studii Medici*, in 1751.

Boerhaave uſed to recommend to his ſtudents the books which they ought to conſult on each ſubject: this catalogue was, in 1726, ſurreptitiouſly and inaccurately printed, and formed only a ſmall volume in octavo; many neceſſary obſervations were forgotten, and various authors both modern and antient were omitted. Haller undertook to remedy theſe deficiencies; and extended the publication to two volumes in quarto. In order to appreciate the merits of this compilation, it is neceſſary to obſerve, that various

ous lexicons and catalogues of medical authors were extant; but the writers had merely given bare lists and titles, unaccompanied by that critical discrimination of the design, doctrine, and general merit of each author, which rendered these volumes so highly acceptable. In this manner Haller has given, under that classical method which Boerhaave had formed, his opinion of more than 4,000 volumes.

In the extension of this plan, as it appears in his own *Bibliotheca*, Haller begins, by tracing the history of each branch of medicine from its origin, through the preceding ages; and by connecting the history of each in the several periods, has, in some measure, made his publication a compendious history of physic.

Haller's extensive knowledge of antient and modern languages, enabled him to comprehend a large field; and his indefatigable industry, united to great penetration in investigating the doctrines of the antients, equally exhibits his erudition and that sound judgment by which he has appreciated the merit of those sages of physic, in a manner highly interesting and instructive.

In his judgment of the moderns he is candid and impartial; his great knowledge of his sub-

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jects qualified him to distinguish all original doctrines, new facts, and observations, and to guard against such errors as might mislead young and incautious practitioners; who are but too apt to be influenced in their practice, by imbibed theories, and prejudice towards particular authors.

He has given additional value to his work, by annexing to the account of celebrated books, short biographical anecdotes of the author. He mentions all the different editions, that came to his knowledge, and particularly marks such as were in his own library. And it is a matter of astonishment, that in this manner he notices and reviews not fewer than 11,000 volumes. As the literary history of physic was among the favourite objects of Haller, this publication cannot but be highly acceptable to such as possess a congenial taste; while the general use and information they afford are sufficiently obvious.

Eight volumes of this work were published during the author's life-time, between the years 1771 and 1778. The anatomical, including the physiology, the botanical, and the chirurgical, were each comprised in two volumes, and bring down the respective subjects nearly to the present time. Two, on the practice of physic, were published

publiſhed by Haller himſelf, a third after his deceaſe by Dr. Tribolet, and a fourth by Dr. Brandis of Childenſheim, from the manuſcript of Haller, which the learned author has conſiderably augmented.

Haller alſo employed the latter period of his life in ſending extracts from eminent publications for the *Bibliotheque Raiſonnee*; furniſhed many of the articles for the ſupplement to the Paris Encyclopédie, for the quarto improved edition of the ſame work publiſhed at Yverdun, and for the dictionary of natural hiſtory printed at the ſame place. He meditated alſo a new edition of his great phyſiological work, of which he put forth the firſt volume in 1777, only a few months before his death.

His active imagination brooding on the civil and political affairs, in which he had been lately engaged, produced, between 1771 and 1774, his three political romances, Uſong, Alfred, and Fabius and Cato, which treat of the deſpotic, monarchical, and republican governments. In Uſong he ſketches, with a maſterly hand, the abuſes of abſolute authority, and ſets forth, in the character of the principal perſonage, the happy effects which may be derived from a virtuous and intelligent ſovereign, even amidſt the horrors of oriental

oriental deſpotiſm. In Alfred he diſplays the advantages of a limited monarchy, wherein the balance of power is wiſely diſtributed; and which, while it avoids the extremes of either, enjoys the benefits of both In Fabius and Cato he deſcribes, with an animation and ſpirit worthy of antient Rome, but with a partiality natural to a republican, the ariſtocratical government as moſt friendly to the diſplay of patriotiſm, and moſt congenial to the exertions of genius. In theſe romances he diſcovers ſound principles of legiſlation, great political ſagacity, a deep inſight into human nature, and a moſt extenſive acquaintance with hiſtory.

If we conſider Haller as a man of piety and a Chriſtian, we ſhall obſerve him tracing, from a comprehenſive view of the creation in its grandeſt as well as in its minuteſt parts, the *neceſſary* exiſtence of a Supreme Being, and the great principles of natural religion. We ſhall ſee him demonſtrating the divine origin of Chriſtianity from a profound ſtudy of the New Teſtament, from the excellence of its morality, its manifeſt influence over the happineſs of mankind, and its tendency to meliorate our nature; and we ſhall find him proving himſelf, both in his life and writings, a zealous friend and able advocate of the revealed doctrines.

Haller, at a very early period of his life, undertook the defence of natural and revealed religion on all occaſions. In 1732 he declared, in his preface to his poetry, that he was firmly convinced of their truth; in 1747, he rejected with horror the dedication which La Metrie offered to prefix to his work entitled "*L'Homme Machine*;" and he declared, in various literary journals, that he neither acknowledged as his friend, or his diſciple, a man who entertained ſuch impious notions. In a preface which he publiſhed in 1751, to Formey's abridgement of Crouzas's "*Examen du Pyrrhoniſme*," he paints, in the ſtrongeſt colours, the dreadful effects of infidelity both on ſociety and individuals. He alſo put forth, in the German tongue, "Letters to his Daughter, on the Truth of the Chriſtian Revelation;" he publiſhed an extract from Ditton's "Truth of the Reſurrection of Jeſus Chriſt," which he acknowledges to have firſt cleared any doubts he might entertain on that ſubject. He avows, at the ſame time, that he received infinite ſatisfaction from the ſtudy of the New Teſtament, becauſe he was never more certain of holding converſe with the Deity, than when he read his *will* in that divine book.

In 1775, he finally gave to the public, alſo in the

the German language, "Letters concerning ſeveral late Attempts of Freethinkers yet living againſt Revelation." In this work the author examines and refutes the objections to Chriſtianity, advanced in ſo lively and dangerous a manner by Voltaire in his *Queſtions ſur l'Encyclopedie.* "If this latter publication," adds Sennebier, "may be conſidered as an Index to the Doubts and Arguments againſt the Chriſtian Religion, the work of Haller may be entitled an Index to the Anſwers in favour of the ſame Revelation, to be conſulted by thoſe who wiſh impartially to diſcuſs both ſides of this important queſtion." When learning and philoſophy, inſtead of being employed in ſupporting ſceptical tenets by artful ſophiſtry, thus lend their united aſſiſtance to the cauſe of religion, they then truly become an honour to the poſſeſſor, and a benefit to ſociety.

Even this great and good man was not exempt from a too anxious ſolicitude for his welfare in a future ſtate. That depreſſion of ſpirits, which ought juſtly to be conſidered as the effects of diſeaſe, and the warmth of his imagination conſpiring perhaps with the narrow principles of Calviniſm, in which he had been educated, led him to reflect rather on the *juſtice* than the *mercy* of the Deity, and to bewilder himſelf in the endleſs

leſs mazes of predeſtination and grace. In one of his deſponding fits, he compared himſelf, as uncertain of ſalvation, to a man placed on the edge of a precipice without any ſupport, and expecting every inſtant to fall. At another moment, animated with a paſſion for ſcience, he breaks out, in a letter to his friend Bonnet, into the following exclamation, expreſſive of his regret to quit a world which he had improved by his diſcoveries, and which he might ſtill further illuminate by his zeal and application. "O my poor brain, which muſt return to duſt; and all the knowledge and information which I have been collecting with ſuch unwearied labour, will *fade away* like the dream of an infant."

Theſe little weakneſſes of a great mind overpowered by conſtitutional irritability, and ſtruggling againſt early prejudices, are more intereſting to the man who feels and reſpects the imperfections of human nature, even in its moſt exalted ſtate, than the moſt pompous and exaggerated accounts of *unerring* wiſdom, or *uniform* virtue which never exiſted. And it is a pleaſing ſatisfaction to learn, that reaſon and religion roſe ſuperior to the gloomy deſpondency of ſickneſs; and that Haller met death with the calmneſs of a philoſopher, and the faith of a Chriſtian. In the

the laſt letter which he wrote, a few days before his deceaſe, he ſpeaks indeed of the tremendous grandeur of eternity, but with hopes rather than with fears; and looks back upon his paſt life with ſatisfaction: amidſt a few complaints uttered on his painful ſufferings, he mentions his country with the moſt ardent affection, and offers up his laſt prayers for its preſervation and welfare.

He continued his literary labours, and preſerved his ſenſes and compoſure to the laſt moment; he beheld his end approaching without fear and regret; "My friend," ſaid he to the phyſician who attended him, "I die, my pulſe is ſtopped," and then expired. He died on the 12th of December 1777, in the ſeventieth year of his age.—Thus lived, and thus died, the great Haller; a man to whom Michaelis, the eminent orientaliſt, juſtly applies an obſervation which had been made on the genius of Ariſtotle; "*Neque cælo, neque terrâ, neque mari quicquam relinquere voluit incognitum, indole præterea adeo mirabili, ut ad ſingula natum præcipuè dicas* *."

In his perſon Haller was tall and majeſtic, of

* He left nothing unexplored, either in the heavens, on the earth, or in the ſea, and was of ſuch a wonderful capacity, that he ſeemed born for the immediate object of his purſuit.

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a ſerious and expreſſive countenance; he had at times an open ſmile, always a pleaſing tone of voice, uſually low, and ſeldom elevated, even when he was moſt agitated. He was fond of unbending himſelf in ſociety, was on thoſe occaſions remarkably cheerful, polite, and attentive; he would converſe with the ladies on faſhions, modes of dreſs, and other trifles, with as much eaſe as if he had never ſecluded himſelf from the world.

Mr. Bonnet informed me, that Haller wrote with equal facility the German, French, and Latin tongues; that he was ſo well acquainted with all the European languages, except the Ruſſian, Poliſh, and Hungarian, as to ſpeak with the natives in their reſpective idioms. When he converſed on any ſcience or ſubject of literature, his knowledge was ſo extenſive, that he ſeemed to have made that his particular ſtudy. His profound erudition in every branch of ſcience, is well known to all who are converſant with his works: but the variety of his information, and the verſatility of his talents, are thus delineated by a perſon * who was his particular friend. "He poſſeſſed a fundamental knowledge of natural hiſtory; was well read in

* Tſcharner Lobrede, &c. p. 87.

hiſtory both antient and modern, univerſal and particular; and uncommonly verſed in the ſtate of agriculture, manufactures, trade, population, literature, and languages of the reſpective nations of Europe: he had read with attention the moſt remarkable voyages and travels; and was particularly converſant in the late diſcoveries which tend to illuſtrate the geography of the globe. He had even peruſed many thouſand novels and plays; and poſſeſſed ſuch an aſtoniſhing memory, that he could detail their contents with the utmoſt preciſion.

As it was his cuſtom to make extracts, and to give his opinion of every book which came into his hands, as well for his own private uſe, as for the Gottingen Review *, he read moſt new publications, and ſo eager was he uſually in the peruſal, that he laid them upon the table even when he was at dinner, occaſionally looking into them, and marking thoſe parts with a pencil, which he afterwards extracted or commented upon. He was accuſtomed to make his remarks on ſmall pieces of paper, of different ſizes, which

* Haller reviewed, as his department for that literary journal, all publications on hiſtory, medicine, anatomy, natural hiſtory, and ſeveral miſcellaneous works, particularly thoſe which appeared in Italy.

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he placed in order, and faſtened together; a method he learned from Leibnitz.

He derived from nature extreme ſenſibility, or rather irritability of temper, which is ever the child of genius. He ſpoke therefore from his own experience, when, in a letter to Voltaire, he thus expreſſed himſelf:—"Providence holds with an equal hand the balance of human happineſs. He has loaded you with riches, he has loaded you with glory; but misfortune was neceſſary, and he preſerved the equilibrium by giving you ſenſibility. If my wiſhes could take effect, I would beſtow upon you that *tranquillity* which flies at the approach of genius, which is inferior to genius in relation to ſociety, but far ſuperior in regard to ourſelves: then the moſt celebrated man in Europe ſhould be at the ſame time the moſt happy *."

He was always impatient under ſickneſs as

* *Il faut bien que la providence veuille tenir la balance égale pour tous les humains. Elle vous a comblé de biens, elle vous a comblé de gloire; mais il vous falloit du malheur, elle a trouvé l'équilibre en vous rendant ſenſible. — Si les ſouhaits avoient du pouvoir, j'ajouterois aux bienfaits du deſtin; je vous donnerois de la tranquillité, qui fuit devant le genie, qui ne le vaut pas par rapport à la ſociété; mais qui vaut bien davantage par rapport à nous-même: dès-lors l'homme le plus célèbre de l'Europe ſeroit auſſi le plus heureux.*

well from his extreme ſuſceptiblity of pain, as becauſe he was precluded in that ſituation from his literary occupations. He was fond, therefore, of taking violent remedies, more calculated to remove the immediate effects of pain, and to check his diſorder, than to cure it radically. In his latter years he accuſtomed himſelf to opium*, which, operating as a temporary palliative, only increaſed his natural impatience. This reſtleſſneſs of temper, which occaſionally diſturbed his tranquillity even in his younger days, and in the full flow of his health and ſpirits, was conſiderably heightened by the advances of age, and the diſorders which ſhattered his frame towards the cloſe of his days.

His correſpondence in every period of his life was extenſive, punctual, and carried on in the Engliſh, French, German, Latin, and Italian languages.

Six volumes of Latin epiſtles, and three in the German tongue, addreſſed to him from men of learning in various parts of Europe, have been given to the public, but his own have never made their appearance. It is much to be la-

* Zimmerman informs us, that he took daily ſo large a quantity as eight grains. Uelber de die Einſamkeit, p. 216. ed. Leipſ. 1784.

mented,

mented, that he ſeldom preſerved any copies, being himſelf too much occupied for that purpoſe; and never ſufficiently rich to maintain a ſecretary. His two principal correſpondents, to whom he opened his heart, were Bonnet of Geneva, and John Geſner of Zuric: to the latter he wrote either in German or Latin, to Mr. Bonnet in the French tongue. This celebrated friend of Haller poſſeſſes ſeven manuſcript volumes of his letters: it was an uninterrupted correſpondence of twenty-three years, begun in March 1754, and finiſhing only a few days before his death, in December 1777. This epiſtolary commerce comprehends a great variety of ſubjects, principally concerning phyſiology, natural hiſtory, the ſtructure of the globe, politics, morality, and religion. Haller being accuſtomed to conſult his friend on all occaſions, to diſcloſe his moſt ſecret thoughts, and to relate his diurnal occupations; theſe effuſions of the moment diſcover the ſucceſſive train of his ſtudies, the progreſs of his diſcoveries, and his gradual advances in knowledge.

"Theſe letters of my moſt reſpectable friend," added Bonnet, "diſplay his genius, his underſtanding, and the goodneſs of his heart, more fully than any of his publications. His ſtyle,

conciſe, energetic yet pictureſque, correſponds with the ſtrength and originality of his ideas; and he ſpeaks, with no leſs ſublimity than conviction, of the great truths of natural and revealed religion. Though he treats the numerous advocates for infidelity, and particularly Voltaire, with ſufficient ſeverity; yet his heat is the ardour of conviction, and did not proceed from either pique or ſpirit of contradiction: he ſeemed as if he was perſonally intereſted in all queſtions on revelation, and pleaded its cauſe as if it had been his own. He is no leſs ſevere againſt thoſe writers, who ſeem to exclude the intervention of a firſt intellectual cauſe in the creation and arrangement of the univerſe, and particularly cenſures the materialiſts, who endeavour to deduce mechanically the formation of organized bodies. In a word, his philoſophy was entirely practical, becauſe it was entirely Chriſtian; and nothing ſecured his approbation, but what tended to improve the underſtanding, or to amend the heart."

I am concerned to find, that the publication of this correſpondence, between two ſuch enlightened and virtuous philoſophers as Haller and Bonnet, which in ſome works had been announced to the public, ſhould, on account of private

private reaſons, be relinquiſhed. Religion, morality, philoſophy, and learning, would be greatly benefited by this epiſtolary commerce.

Haller's library, conſiſting of about 4,000 volumes, was purchaſed for £. 2,000 by the emperor, for the public library of Milan, where I examined it in 1785. The collection is particularly rich in books of natural hiſtory, and is rendered invaluable from numerous annotations of Haller, written on the margins.

Haller was three times married, firſt to Marianne Wytſen, in 1731, who died in 1736. 2. To Elizabeth Buchers, in 1738, who died in childbed the ſame or the following year; both natives of Berne. 3. In 1739, to Amelia Frederica Teichmeyer, a German lady, who ſurvived him. He has written and publiſhed the lives of his two firſt wives. He left eight children, four ſons and four daughters, all of whom he lived to ſee eſtabliſhed. His eldeſt ſon, Gotlieb Emanuel, who was born in 1735, followed his father's example in dedicating himſelf to the ſervice of his country, and to the purſuits of literature. He was elected member of the Great Council, and obtained various employments under government, particularly the bailliage of Nyon, in which ſituation he died in 1786.

He diſtinguiſhed himſelf as an author by various publications tending to illuſtrate the hiſtory and literature of Switzerland, and particularly by his *Schweitner-bibliothek*, or Swiſs Library, in 6 volumes 8vo. of which he lived to publiſh only the firſt. In this work, deſervedly eſteemed for its method and accuracy, the indefatigable author enumerates all the books which treat of Switzerland, in all languages, and all the works publiſhed by the Swiſs on all ſubjects. He even deſcends to the minuteſt articles which have appeared in reviews and journals; and in moſt inſtances, where the publication deſerves detail, analyſes the contents, corrects the errors, and gives his opinion on the merits of the performance.

I was perſonally acquainted with the learned author, and am indebted to him for ſome curious information on Switzerland, and for ſeveral anecdotes relative to his illuſtrious father, which I have introduced into theſe biographical memoirs.

LETTER 58.

Mr. Sprungli's Collection of Swiſs Birds—Of the Bearded Vulture.

MR. Sprungli's cabinet of natural hiſtory, is remarkable for the collection of ſtuffed birds, both local and migratory, that are found in Switzerland.

In 1776 this collection conſiſted of two hundred ſpecimens; and when I laſt viſited Berne, in 1786, it had received an addition of fifty ſpecies.

As naturaliſts have long expected with impatience an account of this invaluable collection, I obtained from Mr. Sprungli the encloſed catalogue, which will aſſiſt me in attempting to form a *Faunula Helvetica* *.

One of the moſt remarkable birds in Mr. Sprungli's collection, is the *vultur barbatus* of Linnæus, the *vultur aureus* of Geſner, or bearded vulture of the Engliſh ornithologiſts. As many fabulous tales have been related concerning its uncommon ſtrength and rapaciouſneſs; as great confuſion has ariſen from the variety of names applied by different naturaliſts to the ſame bird; and as ſome travel-

* See the Third volume.

lers

lers have doubted whether this ſpecimen is the large vulture of the Alps, or the golden vulture of Conrad Geſner; I ſhall here ſubjoin a deſcription from particulars principally communicated to me by Mr. Sprungli himſelf, accompanied with a drawing of the head from the natural ſize.

This ſpecimen was a female bird, caught in the canton of Glarus; it meaſured from the tip of the beak to the extremity of the tail, ſix feet ſix inches French * meaſure; and eight feet from the tip of one wing to that of the other expanded. It weighed, when firſt taken, eleven pounds. This bird, though always called a vulture, yet differs from that genus, and is referable to the eagle, in having the head and neck covered with feathers; whereas one of the diſtinctions of the vulture, according to Linnæus, is that the head is deſtitute of feathers.

Notwithſtanding this diſtinguiſhing mark, by which it is referable to the eagle or *falco* genus; yet Linnæus was probably induced to claſs it with the vultures, from the general form of the body, and ſhape of the beak, which is the *firſt eſſential* characteriſtic in the genera of birds.

* Six feet eleven inches $\frac{1}{5}$ Engliſh, and eight feet ſix inches $\frac{6}{15}$.

Mr.

Head of the BEARDED VULTURE from a Drawing of the Natural Size

Mr. Sprungli, however, is of opinion, that it might be claſſed between the vulture and the eagle; and Stor * propoſes to form a new genus of it, under the name of GYPAETUS, by the following characters:

Roſtrum rectum, baſi cera inſtructum ſetis porrectis confertiſſimis barbatum; apice auctum unco ſulcato.

Caput pennis tectum.

The ſpecific character he would define thus:

Gypaetus (grandis) albido-rutilus dorſo fuſcus, tænia nigra ſupra et infra oculos.

It inhabits the higheſt parts of the great chain of the Alps which ſeparates Switzerland from Italy, makes its neſt in cleſts of rocks inacceſſible to man, and uſually produces three young ones at a time, ſometimes four, if we may judge from that number accompanying the old birds, when they deſcend into the lower regions for prey. They live on animals which inhabit the Alps, ſuch as the chamois, white hares, marmots, ſnow hens, kids, and particularly lambs, from which circumſtance it is called *lammer-geyer*, or *lamb* vulture.

If common report may be credited, this rapacious creature ſometimes attacks even man, and

* See Stor's Alpen Reiſin, vol. i.

carries

carries off children. Mr. Sprungli, without abſolutely denying the poſſibility of this account, has, notwithſtanding all his reſearches, never been able to aſcertain a well-authenticated inſtance; and thence rather concludes it to be a fable invented by the peaſants to frighten their children. This ſpecies does not appear but in ſmall companies, uſually conſiſting of the two old birds and their young.

Conrad Geſner has given a ſhort but accurate deſcription of this bird under the name of *vultur aureus*, or gold-geyer*; and an engraving from a ſkin ſent to him from the Griſons. This figure, although rudely executed, yet exhibits with ſufficient accuracy the diſtinguiſhing characters of the ſpecies and genus, ſuch as the configuration of the beak, the legs feathered down to the claws, and particularly the beard. In fine, a compariſon with the ſpecimen in Mr. Sprungli's collection evidently proves that it is the ſame bird.

Since this great naturaliſt, no other perſon ſeems to have deſcribed it from nature, except Edwards, under the denomination of the bearded vulture. The deſcription of that bird, and the engraving given by Edwards † from a ſpecimen

* See *Hiſt. Avium, edit. Frank.* p. 710.

† See tab. 106. of his Hiſtory.

ſent

ſent from Santa Cruz in Barbary, correſpond exactly with the *vultur barbatus* of Sprungli; and the head, if compared with the drawing annexed to this account, will be found to anſwer ſufficiently.

Mr. Sprungli alſo favoured me with the following remarks, in anſwer to thoſe travellers who aſſert, that his ſpecimen is not the large vulture of the Alps, ſometimes called, from its *yellowiſh* plumage, the *vautour jaune*, but a ſmaller ſpecies; becauſe the larger ſort meaſures ſometimes fourteen feet, or more, from the tip of one wing to that of the other. He poſſeſſes two ſpecimens of this bird; the one a full grown female, from which my deſcription and drawing are taken, meaſuring eight French feet: the other is a male, but young, and is ſomewhat leſs. He has alſo examined four ſpecimens, none of which meaſured more than nine feet; but as theſe ſeveral ſpecimens were not full grown males, he is ready to allow, that an inſtance or two may poſſibly have occurred, in which this bird may have meaſured near twelve feet from tip to tip of the wing. Thoſe who give it a greater expanſion, have derived their information either from perſons who were not naturaliſts, or from uncertain and exaggerated reports. The ſame remark may alſo be applied to the fabulous ſtories recorded by the peaſants, concerning its wonderful ſtrength

as

as well as ſize. It is likewiſe to be obſerved, that the peaſants do not confine the name of *lammer-geyer* to this ſpecies; but extend it indiſcriminately to ſeveral large birds of prey, from whence has ariſen great confuſion of names, and much uncertainty in the accounts of this bird.

Some ornithologiſts ſeem to have formed of it ſeveral ſpecies, which on compariſon will appear to be the ſame, or only varieties of the ſame ſpecies. Thus the bearded vulture, the cinereous vulture, and the fulvous vulture, which Mr. Latham has deſcribed as three different ſpecies, are probably the ſame bird as that in Mr. Sprungli's collection. Of the firſt there can be no doubt, ſince Mr. Latham refers to the bearded vulture of Edwards, which I have ſhewn to be that of Mr. Sprungli. The cinereous vulture is deſcribed by Latham after Briſſon: "Beneath the throat hangs a kind of beard, compoſed of very narrow feathers like hairs; legs covered with feathers quite to the toes, which are yellow; claws black*. This deſcription accords with the bird in queſtion, and particularly in the beard, which is the diſtinguiſhing characteriſtic.

The fulvous vulture of Latham is the griffin of Buffon: and the French naturaliſt doubts whether it is not a variety of Geſner's golden

* *Syn.* vol. i. p. 14.

vulture,

vulture, which is proved to be the ſame as Mr. Sprungli's ſpecimen.

While the moſt celebrated ornithologiſts have thus given to the bird different names, they have alſo in other inſtances confounded it with other birds, to which it has no other reſemblance than that of ſize, ſtrength, and voracity.

Thus Buffon erroneouſly conjectures the *vultur gryphus* of Linnæus, or the *condor* * of America, to be the ſame as the *lammer-geyer*, or vulture of the Alps; whereas the deſcription of the condor given by Linnæus, as well as by thoſe who had ſeen it, differs entirely from that of the bearded vulture. The condor is deſcribed by the Swede as having "the head deſtitute of feathers, but covered with a ſlight brown coloured down, with a comb reaching along the top of the head, and having the throat naked and of a

* Mr. Latham, in his Supplement to the General Synopſis of Birds, p. 1. ſeems alſo to adopt the conjecture of Buffon, in claſſing the Lammer-geyer and Condor under the ſame ſpecies; though he confeſſes, "that it ſtill remains dubious, whether the Lammer-geyer be the ſame with the Condor, or a mere variety of the Bearded Vulture." He adds alſo, with a candour which does him honour, "It is much to be feared, that other authors, as well as myſelf, have greatly confounded the ſpecies of Vultures; for being, like the Falcon tribe, long lived, their plumage puts on a great variety of dreſs, ſufficient to deceive thoſe who have hitherto attempted to diſcriminate them."

reddiſh

reddiſh colour." Frezier, in his Voyage to the South Seas, alſo thus deſcribes the condor:— "We one day killed a bird of prey called a condor, which was nine feet from the end of one wing to the end of the other, and had a brown comb or creſt, but not jagged like a cock's: the fore part of its throat is red without feathers, like a turkey; and they are generally large and ſtrong enough to take up a lamb. In order to get them from the flock, they draw themſelves into a circle, and advance towards them with their wings extended, that being drove together, and too cloſe, they may not be able to defend themſelves; then they pick them out and carry them off. Garcilaſſo ſays, there are ſome in Peru ſixteen feet from the point of one wing to the other, and that a certain nation of Indians adored them."

Mr. Latham ſeems alſo to be no leſs miſtaken, when, on the authority of the tranſlator of the Abbè Fortis's Travels into Dalmatia, he conceives the *vultur percnopterus* of Linnæus to be the *vautour des Alpes* deſcribed by Conrad Geſner, and the ſame as Mr. Sprungli's ſpecimen; whereas, on the authority of Haſſelquiſt, who ſaw great numbers of the *percnopteri* in Egypt, the head of that bird is "naked and wrinkled;" and Ray ſays, the feet are naked; two characters that eſſentially diſtinguiſh it from the bearded

vulture,

vulture, in which the head is wholly covered with feathers, and alſo the feet down to the ends of the claws.

The bearded vulture, beſides inhabiting thoſe Alps which ſeparate Italy from Switzerland, is found in Corſica and Sardinia. M. de Hahn informed Mr. Sprungli, that he ſaw a bird in Corſica which was wounded in the wing, and ſhewed as a ſight, that was unqueſtionably the ſame as Mr. Sprungli's ſtuffed ſpecimen: and M. Lettel, in his Natural Hiſtory of Sardinia, gives a figure and deſcription of the ſame bird, under the name of *bartgeyer*, or bearded vulture. It has alſo been found in the mountains of Africa, ſince Mr. Edwards received his ſpecimen from Santa Cruz in Barbary. It is alſo frequent on Caucaſus and the mountains of Dauria, or the ſouth-eaſtern part of Siberia, as we learn from the travels of both Pallas and Gmelin.

You will perhaps be ſurpriſed not to find among the Swiſs birds in the annexed catalogue, the *aigle blanc*, or *aquila alba* of * Briſſon; the *falco Italicus* †, and the *falco montanus* of the ſame ‡; as particularly *zwitzer-falk*, the German name of the latter, ſeems neceſſarily to imply that it muſt be a Swiſs bird: Mr. Sprungli how-

* I. p. 424 † Ib. p. 336. ‡ Ib. p. 352.

ever aſſured me, that he never had been able to diſcover any of theſe ſpecies in the Alps; that probably the *aigle blanc*, if it exiſts, is a variety of the chryſaetos; and that both Briſſon and Willoughby do not cite Geſner for their deſcriptions of the *falco italicus*, but thoſe only who have never been in the Alps.

Of the crows it is worthy of obſervation, that the *corvus graculus* of Linnæus, or *coracias* of Briſſon, is faithfully repreſented by Mr. Pennant, in his Britiſh Zoology, under the denomination of the red-legged crow. It is the ſame bird of which Conrad Geſner * has given a figure, and to which he applies the German appellations, *taha*, *ſteintahen*, *ſteinkrae*, and which he juſtly ſuſpects to be the *cornix cornubiæ*, or the red-legged crow. The *pyrrhocorax* of Geſner, which ſome ornithologiſts ſeem to have confounded with the *corvus graculus*, is however very different, and is called by Linnæus *corvus pyrrhocorax*. Both theſe ſpecies inhabit the Alps, but the pyrrhocorax is the moſt common; and theſe appear, according to Mr. Sprungli's obſervations, to be the only ſpecies of the crow genus that prefer to all others alpine ſituations. As to the *corvus eremita* of Linnæus, Mr. Sprungli ac-

* *Hiſt. Av. ed. Frank.* p. 463.

knowledges

knowledges it is totally unknown to him. All the ornithologiſts indeed mention this bird as an inhabitant of the Alps, on the authority of Conrad Geſner, who deſcribes it under the name of *corvus ſylvaticus*, accompanied with a figure, which has not the leaſt reſemblance to a crow, but rather to a curlew; yet Geſner's deſcription of it is much too imperfect to aſſiſt us in aſcertaining the bird of which he treats.

LETTER 59.

Mr. Wyttenbach's Collection—Account of the Chain of Hills and Alps ſeen from the environs of Berne.

THE Reverend Mr. Wyttenbach of Berne, poſſeſſes a very curious cabinet, principally relating to the natural hiſtory of Switzerland, and to the canton of Berne in particular. It contains ſpecimens of ſeveral thouſand plants, among which is a large number of the alpine

plants of Switzerland; and he has already began to arrange ſeparately the capſules, ſeeds, and fruits.

It is ſtill more intereſting for the great variety of foſſils, ſtones, and petrifactions collected by himſelf in the neighbourhood of Berne, and from the upper and lower Alps.

Mr. Wyttenbach alſo poſſeſſes various ſhells, inſects, and numerous drawings of the glaciers and upper alps, which cannot fail of being highly pleaſing to the curious traveller.

But I was moſt ſtruck with that part of his cabinet, comprehending thoſe objects of natural hiſtory, which in any degree influence agriculture, phyſic, arts, and trades; and which ſufficiently prove the utility of that ſcience in the progreſs and improvement of human comfort and knowledge. On this ſubject he has already publiſhed a diſſertation in the Acts of the Œconomical Society at Berne.

He has not formed this ample collection from mere motives of curioſity, or from deſultory views, but with a ſettled intention to illuſtrate the natural hiſtory of Switzerland in general; to form a topographical and mineralogical deſcription of the canton of Berne in particular; and to elucidate the original formation of mountains, which is the favourite object of his reſearches, and which

his

View of the Alps as seen from the Envi

Published according to Act of Parliament June 18.1795 by T. Cadell &

Alpschelenhorn
Lengenbay
Niese
Blumlis alp
Mountains of Lauterbrunen
Bridge of the Gamchigletscher
Les Doutz Rouges or Buttlassen
Breyapitz
Kreithorn
Kirchfluh
Grefshorn
Belpbay
Schwalmarn
Middey or Mittaghorn
Schwartzhoy
Ebenefluh
Schnabelhorn
Gletscher horn above Stellatein
Chain of Lensingen Leissiggrat
Inngfrau horn

his frequent viſits to the Alps will aſſiſt him in executing with fidelity and accuracy.

At my requeſt, this indefatigable obſerver favoured me with a plan and deſcription of that range of alps which is ſeen from Berne, and of the intervening diſtrict; an extract from which I now ſubmit to your peruſal.

That part of the chain of alps ſeen from Berne, diſtinguiſhed by the different names of Wetterhorn, Schreckhorn, Eger, Jungfrauhorn, Lauter-Aar-Horn, Blumlis Alp, &c. is repreſented on the plan annexed to this letter. You will there obſerve this immenſe amphitheatre, gradually riſing from the environs of Berne, to thoſe elevated peaks, covered with eternal ſnow, and hitherto inacceſſible.

The plains and hills between Berne and Thun are compoſed of rounded ſtones, and argillaceous ſtones called *molaſſes*, frequently ranged in alternate ſtrata.

The *molaſſe* at Gurten, about two miles from Berne, contains, though rarely, gloſſopetræ; and the ſtrata of Belpberg, about ſeven or eight miles from the capital, are full of different ſpecies of chamites, oſtracites, globoſites, ſelenites, ſtrombites, and other ſimilar petrifactions.

The ridge of hills which border the high road between Berne and Thun contains, in ſeveral

places, and particularly above Muſingen, an extenſive ſtratum of oſtracites, ſome pieces of which weigh more than fifteen pounds each. The ſituation of the ſtrata in theſe different hills, their direction, their nature, and the bodies which they encloſe, ſeem to prove, that theſe hills formed antiently one great plain, which has been ſince hollowed and divided by the waters, particularly by thoſe of the Aar.

On the ſlopes and ſummits of theſe hills, which in ſome places are of conſiderable elevation, are frequently found thoſe large maſſes of granite, which furniſh materials for the public works and buildings of Berne. Theſe maſſes ſo nearly reſemble the granite of the Grimſel, and of the mountains which compoſe the great central chain of the alps, as to render it probable, that in the antient revolutions of this globe, they have been brought by the waters to the places where they are at preſent found, before the deep vallies, which now ſeparate them from their original mountains, exiſted. The ſame remark may be as juſtly applied to the blocks of marble and other calcareous ſtones, which, though now removed to a conſiderable diſtance from their native ſituation, are alſo diſcovered in large quantities upon the hills adjacent to Berne, and which likewiſe ſerve for the buildings of that capital.

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As we approach the town and lake of Thun, the view opens and diſcovers, towards the ſouth-eaſt, that high calcareous chain, of which the Stockhorn, the Neuneren, and the Ganteriſh have been illuſtrated by the botanical labours of the celebrated Haller. This chain, which joins that of Schwartzenburgh towards the canton of Friburgh, is chiefly calcareous, and contains fewer petrifactions than the above-mentioned hills: it is not of ſufficient elevation to be covered with ſnow in ſummer.

The Nieſs, which is the laſt mountain in this calcareous chain, ſtands on the borders of the lake; and ſeparates the valley of Frutingen from that of Simme. It is peculiarly intereſting to travellers, on account of the fine view from its ſummit; and to naturaliſts, becauſe it joins to the alps. Towards its foot beds of ſlate have been diſcovered; higher up it is of calcareous ſtone; and near its top is found a ſpecies of pudding-ſtone, filled with ſmall fragments of broken petrifactions.

In traverſing the lake of Thun, its borders, which are planted with vines, are compoſed of rounded ſtones, united by a calcareous cement, as far as the mountains of St. Beat. There, near Rallingen, the rocks are calcareous and rugged,

containing, in a few places, broken petrifactions, of which it is often difficult to aſcertain the ſpecies. On continuing my route at the foot of the St. Beat, I obſerved the firſt rocks, that are abſolutely perpendicular, and even impending, and which are marked at different elevations with furrows, occaſioned by the waters of the lake, that, in former periods, was probably ſeveral hundred feet above its preſent level. I remarked the ſame furrows nearly at the ſame elevations, in the vallies of Lauterbrunnen and Haſli, which coincidence ſeems to prove, that the lake of Thun once extended over all theſe parts, covered the whole plain of Berne, and reached as high as the Lengenberg, where Gruner diſcovered thoſe petrifactions called Pholades.

Having traverſed the lake of Thun, I entered the narrow but agreeable valley of Unterſeven and Interlachen, on each ſide of which the mountains approach each other, and form, if I may ſo expreſs myſelf, the *veſtibule* of the alps. This valley, ſeparating the lakes of Thun and Brientz, which appear to have been once united, is entirely formed by the ſtones which torrents have brought from the alps.

On the right is Abendberg covered with trees

and

and herbage, and ſtretching towards a group of mountains of conſiderable extent; yet little known, though their tops may be ſeen at Berne.

The Ballenhoechſt, Sulek, Schnabelhorn, Schwartzberg, Schwalmern, Schilthorn, Kirchfluh, Latreyenfirſt, and Dreyſpitz, are the moſt remarkable mountains in this group, which on one ſide borders the valley of Lauterbrunnen, and on the other towers oppoſite to the Nieſs, at the commencement of the valley of Frutingen. It is united by means of the Sefinen alps with the Dents Rouges, and the great central chain of granitical mountains. The mountains of this group ſtand on a baſe of argillaceous ſchiſtus, containing a few petrifactions, which is rarely viſible but at certain elevations. Towards Lauterbrunnen, particularly, a fine-grained calcareous ſtone abounds.

To return to the valley of Unterſeven. On the left is another group of calcareous mountains, which extend along the lake of Brientz towards Haſli, and ſtand alſo on an argillaceous ſchiſtus, which is but rarely viſible. And though the granitical chain is at a very ſmall diſtance, it is, however, ſo entirely concealed by theſe ſecondary mountains, as to be no where diſcovered, except between Unterſeven and Interlachen,

lachen, where the Jungfrau preſents herſelf in all her majeſty.

From theſe delightful plains I attempted to penetrate towards the granitical chain of alps, through narrow vallies encloſed between perpendicular rocks of an enormous height; but every where I met with ſecondary mountains, which, to a conſiderable height, conceal the primitive bed of granite, and render the approach to it extremely dangerous, if not impracticable. Thus the valley of Lauterbrunnen is bordered by calcareous rocks even to its farther extremity. At Sichellauenen the firſt maſſes of granite appear, forming the baſe of the calcareous rocks, which are of a very great height. As I continued my route towards the chain, which ſtretches from the Jungfrau to the Groſshorn and Breithorn, I obſerved a rock of ſteatite, in which ſome veins of lead have been diſcovered and worked at Hohalp. Higher up is the true granitical chain, which, however, even there is frequently covered with calcareous peaks.

I found the approach to this chain leſs difficult at Wengenalp, the laſt of a group of calcareous and ſchiſtous mountains between Lauterbrunnen and Grindelwald, which there joins the Jungfrau, the ſummits whereof appear to be

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of granite. In the valley of Grindelwald I obſerved only the argillaceous ſchiſtus and calcareous ſtone: the external parts of the Eger, of the Mettenberg, and of the Wetterhorn, are chiefly calcareous, and cover the granite of the central chain; and the only pieces of granite are the fragments, which are brought into the valley by the two glaciers. That chain, which is oppoſite to theſe glaciers, and borders the northern ſide of the valley of Grindelwald, has an argillaceous baſe, which, in ſeveral places, particularly towards Haſli, contains cornua ammones: this baſe is alſo covered with calcareous rocks, through which it often penetrates at different heights.

I will now take a nearer view of the primitive chain, and trace the alps in the ſame order as they are marked upon the annexed plan. I ſhall conſider the Jungfrau as the center, from which I will take my departure on one ſide towards the Gemmi, and on the other towards the Schreckhorn, Wetterhorn, and Grimſel.

The Jungfrau, or Virgin, is one of the higheſt and moſt beautiful mountains in the canton of Berne. The granite does not appear till a very conſiderable elevation; its foot being in moſt parts covered by rocks, which are of calcareous ſtone, called by the natives *Staldenfluh*, of which

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an elevated peak is denominated the Monk. On following theſe rocks to Sichellauinen, about two leagues from Lauterbrunnen, I obſerved a red ſtratum, that ſeems to form the ſeparation between the granite and the calcareous ſubſtance: it is compoſed of an argillaceous ſlate of red colour, ſpotted with brown and green, and of a fine-grained iron ore (as I was ſurpriſed to find) containing anomites. I obſerved the ſame ſtratum at the bottom of the Eger and Wetterhorn, and of ſeveral mountains towards Haſli: I remarked it at different heights; but as all acceſs to them has been hitherto found impracticable, I cannot attempt to explain a phænomenon, which merits a nearer inveſtigation.

The chain of the Jungfrau ſtretches to the right by thoſe inacceſſible peaks called the Gletſcherhorn, Ebenfluh, Mittaghorn, Groſſhorn, Breithorn. I am entirely unacquainted with their ſtructure, except from the fragments, which I have obſerved at their feet, or on the maſſes of ice deſcending from their tops. Limeſtone occurs at very conſiderable heights; particularly white marble, and a fine grey marble, which is the matrix of a red hematite filled with innumerable ſmall chryſtals of iron of an octagon figure, and attractable by the magner.

Beſides theſe ſtones, I noticed on the glaciers

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of Breitlauinen and Breithorn, various ſpecies of granite, both foliated and in blocks, of iron-ſtone, of *ſaxum fornacum*, or *ſtelſtein*, and of argillaceous and micaceous ſchiſtus. All theſe fragments ſufficiently prove, that granite prevails in the higher parts, although it is frequently covered with ſecondary mountains.

To the right is the majeſtic Blumlis alp, which is a fine object from the plains: a large glacier, mentioned by no author, ſtretches at its feet. I firſt noticed it from the oppoſite heights of Oeſchenengrat, and at the ſame time obſerved, that the feet of the Alpſchelenhorn and Blumlis alp are covered with black ſchiſtus, and that the granite is not apparent, but at a great height.

A few days after this expedition, I mounted to the ſummit of the glacier, called by the peaſants Gamchigletſcher, where it forms a very ſteep ridge towards the valley of Lauterbrunnen. From thence I beheld the vaſt amphitheatre of the Lauterbrunnen glaciers: I remarked alſo, that the valley of Lauterbrunnen ends at this place; that it has only one iſſue behind Blumlis alp, where a large glacier, with a plain and unbroken ſurface, ſtretches towards the valley of Gaſter. Here then is the extremity of the valley of Lauterbrunnen, which expands

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at the feet of the Eger and the Jungfrau, continues almoſt in a ſtrait line as far as Sichellauinen to the foot of the Gletcher-horn and of the glacier of Stuffiſtein, where it forms an angle, and bends towards Blumlis alp.

The ridge of the glacier of Gamchi is of a black calcareous ſtone, which, in many places, is of a fine texture, and ſplits into lamina of a rhomboidal form; in other parts it is coarſely granulated, containing white and black ſpar.

The ſides of the Blumlis alp, that border the glacier, are black ſlate, in which I found ſeveral balemnites, and a fragment of a cornu ammonis a foot in diameter. The pieces of granite which are diſcovered upon the glacier, and which moſt probably fell from the ſummits of the Blumlis alp and of the Dents Rouges, is very ſimilar to that granite, in which the veins of lead are traced near Sichellauinen in the valley of Lauterbrunnen.

The granitical chain, which extends on the right by the Alpſchelenhorn and the Altits, is entirely concealed and loſt in Mount Gemmi, where only calcareous ſtone and ſlate are diſcovered. As I have not yet had any opportunity to examine the mountains of Simmenthal and of Geſſenay, I cannot inform you, if the granite appears through their calcareous covering.

But

But let us return to the Jungfrau, and trace the mountains towards Grindelwald and the Grimſel. The two high pyrāmids which tower near the Jungfrau are the two Egers, called from their poſition Exterior and Interior. Calcareous ſtone is viſible to a great height. Many perſons indeed pretend, that the whole ſide of the Exterior Eger towards Grindelwald is entirely calcareous; but I am convinced, from repeated obſervations, that the ſubſtance of theſe mountains is granite, though it is covered with calcareous ſtone lying on reddiſh ſlate, which in many places forms a ſpecies of breſcia, compoſed of an argillaceous baſe, covered with calcareous fragments. You obſerve behind the Exterior Eger two ſmall peaks, which ſeem united by a ridge: theſe are the Vieſcherhorn and the Zeſenberg, which overlook the inferior glacier of Grindelwald. The ſtones that have fallen on the glacier ſhow, that their ſummits, as well as that of the Schreckhorn, are of granite in blocks, veined granite, and other lamellated rocks, which frequently contain green ſteatites, amianthus, and chryſtals of quartz.

The high peak, which appears to ſtand near the Zeſenberg, is at a very conſiderable diſtance, and probably ſeparated from it by large vallies of ice. This peak, that has hitherto eſcaped

caped the mention of travellers, ſeems to be the Finſter-Aar-horn, which can only be approached from the Grimſel; and by traverſing the glacier of the Aar. I have ſeen it from the ſummits of the St. Gothard, from one of the heights which ſeparate the valley of Grindelwald from the lake of Brientz; I have been at its foot upon the glacier of the Finſter-aar; and on all ſides, and in all places, its elevation is ſtupendous, and appears to me to exceed even that of the Schreckhorn, which has been hitherto conſidered as the higheſt.

The Schreckhorn, or peak of terror, riſes between the two glaciers of Grindelwald. Concealed by its baſe, the Mettenberg, it is not ſeen from the valley of Grindelwald; and the rugged paths which lead acroſs the ſuperior glacier to its foot, are extremely difficult and dangerous. Part of it is obſerved from that glacier. The tops of the Mettenberg are of granite, and its lower parts of lamellated rock, blended with mica and quartz. The piked ſummits of the Schreckhorn, which riſe to an enormous height, appear to be of pure granite and other primitive ſtones.

The next in this chain, is the Wetterhorn, or Stormy Peak, whoſe perpendicular ſides border the ſuperior glacier. The exterior part of this mountain

mountain is of calcareous ſtone to a very conſiderable elevation, but its ſummits are undoubtedly of primitive rock. I noticed along its ſides the ſame red ſtratum, which makes its appearance on the Eger and at the foot of the Jungfrau.

Behind the Wetterhorn is ſeen an elevated rock, which is ſaid by the inhabitants of Grindelwald to border the glacier of the Lauter-aar, and which from thence has been aſcended by ſeveral *chaſſeurs*.

On examining the ſtones which have been brought down by the ſuperior glacier, I did not diſcover much granite in maſs, but often veined granite, and lamellated rock, which frequently encloſe pieces of the corneus ſpathoſus mixed with ſteatites, pyrites, and quartz.

The foot of the Wetterhorn and that of the Mettenberg contain, in ſeveral places, a fine ſpecies of white marble, with red, green, and yellow veins: a quarry of which, now covered by the inferior glacier, was formerly worked.

In paſſing from Grindelwald to Meyringen, I traverſed the Scheidek, which entirely conſiſts of black ſlate, that ſtands on the foot of the Wetterhorn. This ſlate continues to compoſe the chain that divides Grindelwald from the plains of Haſli and the lake of Brientz.

As I deſcended the Scheidek, I obſerved, on my right hand, the chain that joins the Wetterhorn and runs towards the Grimſel. As I have not particularly examined this chain, I ſhall only remark in general, that from an inveſtigation of the ſtones and fragments which ſtrew the vallies and ſides of the hills, it appears to contain the ſame ſpecies of marble which I found on the ſuperior glacier of Grindelwald, alſo red ſlate, argillaceous breſcia, and various granites. But thus much is certain, that the front of theſe mountains is entirely concealed by ſecondary ſubſtances; and that the true region of granite was not apparent, until I had paſſed Meyringen and aſcended the Grimſel, during the greateſt part of which aſcent I only noticed lamellated rocks and granite. All the mountains which form the Grimſel and the neighbouring chain, are concealed in my plan by the Wetterhorn; they extend behind the Schreckhorn as far as the Finſter-aar-horn. This is the true region of granite and other primitive rocks, the heart of the central chain, and the great obſervatory of the naturaliſt.

LETTER

LETTER 60.

Excurſion to Thun, Worbe, and Hindelbank—Tomb of Madame Langhans.

THE environs of Berne are in general extremely delightful, and no road exhibits a more pleaſing variety of hill and dale than that which leads to Thun. It runs through an agreeable country; winds through fertile meadows, enriched with dark foreſts of pine and fir, and occaſional groves of beech and oak. The cattle, lately deſcended from the Alps, were browzing on the paſtures, and added to the animation of the ſcenery. The well-being of the inhabitants is viſible from the cultivation of the grounds, and the number and neatneſs of the cottages and farm-houſes which are ſcattered about the fields, ſkirted by trees, or half concealed amid tufts of wood.

Thun is diſtant about twelve miles from Berne: it occupies the bottom and the brow of a hill, and ſtands on both ſides of the Aar. It contains twelve hundred ſouls, enjoys conſider-

able immunities, has its own magiſtrates and courts of juſtice, in which the bailif from Berne always preſides, and from whoſe deciſion an appeal lies to the capital. The inhabitants employ themſelves in carding and ſpinning ſilk for the manufactures of Baſle. Some of the burghers poſſeſs large herds of cattle.

To the north-eaſt ſtands, on an eminence, the church and the caſtle, which is the reſidence of the bailif, and occupies the higheſt point. From its windows I enjoyed a moſt pleaſing and extenſive view, not inferior in its kind to any proſpect in Switzerland. Underneath is the town, occupying both ſides of the Aar, ſtanding in a rich plain of paſture, and bounded by a chain of hills, black with foreſts of fir, which extend from Berne and join the Nieſs, a brown and rugged mountain, that riſes rapidly from the edge of the lake. To the eaſt, a ſmall ridge covered with vines and trees; and to the ſouth-eaſt, part of the lake of Thun, bounded by hills riſing to the mountains and alps of Lauterbrunnen and Grindelwald, "*piled up to the clouds.*"

The Aar flows from the lake between two level promontories, prettily ſprinkled with trees, on one of which ſtands the caſtle of Schadan. The lower parts of this view, contraſted with the rugged rocks and mountains, reſemble a painting

painting of Claude by the ſide of a Salvator Roſa.

From Thun I returned about ſix miles to the village of Maſſic, where I quitted the high road and paſſed through pleaſant thickets of beech and oaks, over fields and encloſures; the cottages and hamlets agreeably ſituated in lawns, and amid clumps of trees.

In about an hour and a half I entered the road which leads from Berne to Langenau, and aſcended to the upper part of the village of Worbe, where I paſſed a moſt agreeable day with an amiable family, who favoured me with a moſt cordial and polite reception. The view from their houſe, which ſtands in the midſt of a field, is not inferior to that from the caſtle of Thun: it commands a rich encloſed and well-wooded country, gently broken into hill and dale, and watered by many lively ſtreams; the huge white peaks of the Jungfrauhorn, Schreckhorn, and Wetterhorn, overtopping a hill embrowned with firs.

I made alſo an excurſion to Hindelbank, a village about four miles from Berne, in order to examine the tomb of Madame Langhans, a moſt celebrated work of Nahl, a Saxon ſculptor. Being employed in conſtructing a ſepulchre for Count d'Erlach, he was lodged in the houſe of

the clergyman, his particular friend, whoſe wife, a woman of uncommon beauty, expired in child-bed on Eaſter-eve. Struck with the time of her death, animated by the recollection of her beauty, ſympathiſing with the affliction of her huſband, he conceived and finiſhed this affecting monument. It is placed in the body of the church, ſunk into the pavement like a grave, and covered with two folding-doors. When theſe are opened, a grave-ſtone appears as if juſt rent into three fractures, through which is half diſcovered the figure of a woman ſlightly veiled with a ſhroud. She is repreſented at the moment of the reſurrection, when "*the graves are commanded to yield up their dead.*" With her right hand ſhe is gently raiſing that portion of the broken grave-ſtone which lies over her head; and in the other holds a naked infant ſtruggling with its little hands to releaſe itſelf from the tomb. "*Here am I, Lord, and the child whom thou gaveſt me**," are the ſublime words which form the inſcription. Below is the name of the deceaſed, "Anna Magdalena Langhans, wife of the clergyman. Born 1723; died 1751." The workmanſhip is by no means inferior to the original deſign. The artiſt has

* Hier Herr bin ich; und das kind, ſo du mir gegeben haſt.—An engraving of this monument is publiſhed by M. de Mechel of Baſle.

formed the whole ſepulchre out of one block, and ſo naturally expreſſed the ſwelling of the ſtone, that the fragments ſeem as if they had juſt burſt, and were in the act of opening. The only circumſtance to be regretted is, that the materials are not ſo durable as ſuch a monument deſerves; being of ſand-ſtone, they are too ſoft to reſiſt the effects of time, and even now exhibit ſome ſymptoms of decay.

Nothing perhaps can more ſtrongly diſplay the ſuperior effect of ſimplicity over magnificence, than the compariſon of this tomb with the mauſoleum of Count d'Erlach in the ſame church. The latter conſiſting of ſeveral marble figures, executed in a maſterly ſtile, and loaded with all the emblems of rank and opulence, ſcarcely attracts a momentary attention; while this ſimple grave-ſtone "*ſpeaks home*" to the heart of every perſon of taſte and feeling.

LETTER 61.

Viſit to Michael Schuppach, the Phyſician of Langenau.

Langenau, Sept. 18.

YOU have heard, perhaps, of Michael Schuppach, the famous Swiſs doctor; of whoſe ſagacity in diſcovering the ſeat of diſorders, and applying ſuitable remedies to them, many wonderful ſtories are recounted by travellers; and which, like Virgil's Progreſs of Fame, have increaſed in the marvellous in propoſtion as they receded from the ſcene of action. I am now lodged in the houſe of this celebrated Æſculapius: it is ſituated above the village of Langenau, on the ſide of a ſteep acclivity; from which circumſtance he is generally ſtyled *the phyſician of the mountain.*

Upon our arrival we found the doctor in his apartment, ſurrounded by ſeveral peaſants, who were conſulting him upon their reſpective complaints; each having brought with him a ſmall bottle, containing ſome of his water: for, by inſpecting

ſpecting the urine, this medical ſage pretends to judge of the ſtate of the patient. His figure is extremely corpulent; he has a penetrating eye; and a good-humoured countenance. He is ſeated oppoſite to the perſon who conſults him, one moment looks at the water, the next at the patient; and continues examining alternately the one and the other for ſome time, occaſionally whiſtling during the intervals. He then opens the ſtate of the caſe, acquaints the conſultant with the nature of his complaints, and has ſometimes the good fortune to hit upon the true cauſe. In a word, his knack of diſcovering diſorders by urine, has gained ſuch implicit faith in his ſkill, that we might as well queſtion the Pope's infallibility before a zealous catholic, as the doctor's in the preſence of his patients. He has certainly performed ſeveral great cures; and the rumour of them hath brought perſons from all quarters of Europe, who are come hither for his advice.

The doctor was formerly a village ſurgeon, has a ſlight knowledge of anatomy, and is tolerably verſed in botany and chemiſtry. His acquaintance with the theory of phyſic is ſaid to be inconſiderable: the greateſt part of his knowledge being derived from his extenſive practice, notwithſtanding he never ſtirs a quarter of a mile from his own houſe; for he would not take the trouble

trouble of going to Berne, even to attend the king of France.

It is more than probable, that much of this extraordinary man's ſucceſs, is owing to the great faith of his patients; to the benefit they receive from change of climate; to the ſalubrious air of this place; and to the amuſement ariſing from the conſtant ſucceſſion of different company. But whatever may have been the cauſes of his celebrity, it has come to him, as all accounts agree, unſought for by himſelf. He has certainly many excellent qualities: humane and charitable to the higheſt degree, he not only furniſhes the indigent peaſants who conſult him, with medicines gratis, but generally makes them a preſent in money beſides, and he always appropriates a certain portion of his gains to the poor of his pariſh. His wife and grand-daughters are dreſſed like the peaſant women of the country; and he has ſhewn his good ſenſe in giving to the latter a plain education: the eldeſt he beſtowed in marriage, when ſhe was but fifteen, upon one of his aſſiſtants, and with her £. 1,300; no inconſiderable portion for this country. He procured a match for her ſo early, he ſaid, to prevent her being ſpoiled by the young gentlemen telling her that ſhe was pretty, and inſpiring her with the ambition of marrying above her rank.

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If domeſtic harmony, and the moſt perfect ſimplicity of manners, have any pretenſions to pleaſe, you would be highly delighted with this rural family. The wife is a notable active woman, and ſuperintends the houſehold affairs with remarkable cleverneſs: ſhe aſſiſts her huſband likewiſe in preparing his medicines; and, as he talks no other language than the German, ſhe ſerves occaſionally as his interpreter. As a proof of his confidence in her adminiſtration of his affairs, ſhe acts alſo as his treaſurer, and receives all his fees; which, in the courſe of a year, amount to a conſiderable ſum: for, although he never demands more than the price of his medicines, yet no gentleman conſults him without giving an additional gratuity. She has likewiſe received many preſents from perſons who have reaped benefit by her huſband's preſcriptions: ſeveral of theſe preſents conſiſt of valuable trinkets, with which on days of ceremony ſhe decks herſelf to the beſt advantage, in the ſimple dreſs of the country.

The family ſit down to table regularly at twelve o'clock: there are always ſome ſtrangers of the party, conſiſting not only of thoſe perſons who are under the doctor's care, but of travellers, like ourſelves, who are led by motives of mere curioſity. When the weather is fine, and their

gueſts more numerous than uſual, dinner is ſerved in an open ſhed, that overlooks the adjacent country, with a diſtant view of the glaciers beyond the lake of Thun. Yeſterday ſome peaſants, whom the doctor had invited, formed part of our company; after dinner, he gave ſome money to thoſe that ſate near him, and ordered one of his grand-daughters to diſtribute his bounty to the others. The benevolence of the old man, his gaiety and good-humour, the cheerfulneſs of his family, the gratitude of the poor peaſants, the beauty of the proſpect, and the fineneſs of the weather, formed all together a moſt agreeable and delightful ſcene; and I do not remember to have ever partaken of any meal with a more ſenſible and heart-felt ſatisfaction.

This ſingular man is very often employed in giving advice from eight in the morning till ſix in the evening, with no other intermiſſion than during the time he is at table. His drugs are of the beſt kind; for he collects the ſimples, and diſtills them himſelf. His houſe, like thoſe of the peaſants, is conſtructed of wood; and, though always full of people, is remarkably neat and clean. In ſhort, every thing about him bears the appearance of the pleaſing ſimplicity of former ages.

I had

I had almoſt forgotten to tell you, that I conſulted him this morning; and have reaſon to be highly ſatisfied with his preſcription: for, he told me I was in ſuch good health, that the only advice he had to give me, was "to eat and "drink well, to dance, be merry, and take mo-"derate exerciſe."

It is now Langenau fair; and the village is crowded with the neighbouring peaſants. Great numbers of the men have long beards, and many of them cover their heads with a woman's ſtraw hat, extremely broad, which makes a very groteſque appearance: their dreſs is chiefly a coarſe brown cloth jacket without ſleeves; with large puffed breeches of ticking. The women, who are remarkably handſome, wear their hair plaited behind in treſſes, with the ribband hanging down below the waiſt; a flat plain ſtraw hat, which is very becoming; a red or brown cloth jacket without ſleeves; a black or blue petticoat bordered with red, and ſcarcely reaching below the knees; red ſtockings with black clocks, and no heels to their ſhoes; their ſhifts of extremely fine linen, faſtened cloſe round the throat by a black collar with red ornaments: the better ſort have chains of ſilver between the ſhoulders, brought round under each arm, and faſtened beneath

neath the boſom, the ends hanging down with ſome ſilver ornaments.

I am ſo charmed with the ſituation of this village, the cheerfulneſs and ſingularity of this ruſtic and agreeable family, and the uncommon character of the humane doctor, that I could with pleaſure continue here ſome days longer; but I am preſſed for time, and have a long journey before me.

POSTSCRIPT.

THIS celebrated empiric died in March 1781; and Langenau, which I again viſited in Auguſt 1786, was no longer the reſort of the ſick, the valetudinarian, the curious, and the idle. The doctor had gained by his practice £. 10,000; of which ſum his wife received a third, and the remainder was diſtributed among his ſon-in-law and grand-children.

Langenau is ſituated at the commencement of the Emmethal, a valley remarkable for its cultivation and beauty. Many of the farmers are extremely rich: the people appear in general contented and happy; the wooden cottages ſcattered about the fields, are uncommonly neat and comfortable, and announce, in their general appearance, the well-being of the peaſantry.

LETTER

LETTER 62.

Payerne—Moudon—Geneva—Calvin.

Geneva, Sept. 6.

I TOOK leave of my friends at Langenau, in order to proceed to Avignon; where I am going to pay a viſit to the *Abbé de Sade*, author of the intereſting memoirs of the life of Petrarch. Monſieur de Vigur, a ſenator of Soleure, offered me a place in his carriage to Berne: and, as my principal object in travelling is to acquire intelligence, I very gladly embraced this opportunity of leading my worthy and well-informed companion into a converſation, not only concerning the government of Soleure in particular, but in relation alſo to Switzerland in general; and I found him exceedingly well-diſpoſed to anſwer the ſeveral queſtions he allowed me to propoſe to him.

The next day I repaſſed through Morat and Avenches, and ſlept at Payerne, a town in the canton of Berne, which enjoys conſiderable privileges. Upon the bridge over the Broye, is an antient Roman inſcription: as I was endeavouring

ing to decypher it, a plain-looking man accoſted me in a very ſolemn tone of voice, and ſaid, he had often tried to make out the inſcription, but without ſucceſs; though he could read very well, and had a ſmattering in Latin. "For," added he, "what can be the meaning of N and I and O, and all thoſe great letters, which ſeem to have no connection with each other? Give me a page of plain Latin, and I will tranſlate it from the beginning to the end; but for theſe Ns, Is and Os; take my word for it, notwithſtanding all your pains, you will never be the wiſer." However, as I did not ſeem diſpoſed to follow his advice, but continued decyphering the inſcription (which was by no means a difficult taſk) he appeared aſtoniſhed at my obſtinacy, and left me, with an apparent air of pity, to my hopeleſs fortune.

Moudon is an handſome town, the principal burgh of a bailliage of the ſame name, and formerly the capital of all that part of the Pays de Vaud, which belonged to the duke of Savoy. It was alſo the ordinary reſidence of his chief bailif, and the place where the aſſembly of the ſtates were accuſtomed to meet. The bailif appointed by the ſovereign council of Berne, reſides in the caſtle of Lucens, built upon the ſummit of a mountain, in a ſituation exceedingly pictureſque.

picturesque. This castle formerly belonged to the bishops of Lausanne, and was one of their favourite seats, before the reformation was introduced into this country.

Geneva lies upon the narrowest part of the lake, where the Rhone issues in two large and rapid streams, which soon afterwards unite. That river separates the city into two unequal divisions, receives the muddy Arve in its course, and flows through France into the Mediterranean. The adjacent country is uncommonly picturesque, and abounds in magnificent views: the several objects which compose this enchanting prospect, are, the town; the lake; the numerous hills and mountains, particularly the Saleve and the Mole, rising suddenly from the plain in a variety of fantastic forms, backed by the glaciers of Savoy, with their frozen tops glistening in the sun; and the majestic Mont Blanc rearing its head far above the rest.

Geneva, which lies partly in the plain upon the borders of the lake, and partly upon a gentle ascent, is irregularly built; the houses are high, and many, which stand in the trading part of the city, have arcades of wood, which are raised even to the upper stories. These arcades, supported by pillars, give a gloomy appearance to the street; but are useful to the inhabitants in

protecting them from the ſun and rain. Geneva is by far the moſt populous town in Switzerland; and contains 24,000 ſouls. This ſuperiority of numbers is undoubtedly owing to the great induſtry and activity of the inhabitants; to its more extenſive commerce; to the facility of purchaſing the burgherſhip; and to the privileges which government allows to all foreigners. The members of this city are diſtinguiſhed into citizens and burgheſſes, inhabitants and natives *. The citizens and burgheſſes are alone admitted to a ſhare in the government: the inhabitants are ſtrangers who are allowed to ſettle in the town with certain privileges; and the natives are the ſons of thoſe inhabitants, who poſſeſs additional advantages. The two laſt claſſes form a large majority of the people.

The liberal policy of this government, in receiving ſtrangers and conferring the burgherſhip, is the more remarkable as it is contrary to the ſpirit and uſage of the Swiſs. It is here, indeed, more neceſſary; the territory of this ſtate being ſo exceedingly ſmall, that its very exiſtence depends upon the number and induſtry of

* Since the late revolution in 1782, there is a fifth claſs, called *domiciliés*, who receive from the magiſtrates an annual permiſſion to remain in the city.

the people: for, excluſive of the city, there are ſcarcely 16,000 ſouls in the whole diſtrict of the Genevois.

The reformed doctrines firſt preached at Geneva in 1533, by William Farel, a native of Gap in Dauphiné, and Peter Viret of Orbe, owed their final reception and eſtabliſhment to John Calvin. That celebrated reformer was born at Noyon, in 1509, and being driven from France by the perſecutions which Francis the Firſt had raiſed againſt the proteſtants, made his firſt appearance in this city in 1536.

Notwithſtanding Zuingle, Œcolampadius, and Haller, had reformed the greateſt part of Switzerland, ſome years before that period; yet Calvin, as Voltaire juſtly obſerves, has given his name to the ſectaries of the reformed religion, in the ſame manner as the new continent took its appellation from Americus Veſpuſius, although the original diſcovery was made by Columbus. And although Calvin was not the firſt reformer of Geneva; yet, as he gave additional ſtrength and ſolidity to the new eſtabliſhment, and founded the eccleſiaſtical form of government, he totally eclipſed the fame of his friend William Farel, who ſcattered the firſt ſeeds of reformation, which the other brought to maturity. In

truth, ſo great was the aſcendency which Calvin, although a foreigner, acquired over the citizens, that he poſſeſſed conſiderable influence even in civil matters; and bore a large ſhare in ſettling the political conſtitution. Conſcious that religion derives ſupport from every branch of knowledge, he liberally promoted the cultivation of ſcience, and the ſtudy of elegant literature. To this end, as well as to encourage theological erudition, he prevailed upon government to eſtabliſh a public academy: but with ſingular diſintereſtedneſs declining the propoſal of being appointed perpetual preſident, he obtained that office for his friend and fellow-labourer, Theodore Beza. In this new ſeminary, Calvin, with Theodore Beza, and his other colleagues, eminent for their ſuperior knowledge, read lectures, with ſuch uncommon reputation and ſucceſs, as attracted ſtudents from all quarters.

There is ſuch a ſtriking ſplendour in the brighter parts of this diſintereſted and celebrated reformer's character, as to render us, at firſt glance, almoſt inſenſible to thoſe dark ſpots which in ſome inſtances have obſcured its glory. But when we reflect on his aſperity and arrogance; and, above all, on the cruel perſecution of Servetus;

we

we cannot but lament that he did not riſe ſuperior to the intolerant principles of the age, which in all other inſtances he helped to enlighten. With regard, however, to his intolerant principles, it muſt be acknowledged, that the ſame uncharitable ſpirit prevailed alſo among many of the moſt celebrated reformers; who unaccountably conceived, in oppoſition, not only to the genius, but to the cleareſt precepts of the goſpel, that perſecution for conſcience ſake, although unchriſtian in every other eccleſiaſtical eſtabliſhment, was juſtifiable in their own. This abſurd and dangerous opinion, gave great advantage to their adverſaries of the papal hierarchy: for, it is obvious to the meaneſt underſtanding, that, if perſecution is juſtifiable in any particular church, it muſt be ſo univerſally.

The republic of Geneva is, however, at preſent, the moſt tolerating of all the reformed ſtates in Switzerland; being the only government in this country, which permits the public exerciſe of the Lutheran religion. In this reſpect the clergy, no leſs wiſely, than ſuitably to the ſpirit as well as the letter of the Chriſtian revelation, have renounced the principles of their great patriarch, Calvin: although they

ſtill hold that able reformer in high veneration; yet they know how to diſtinguiſh his virtues from his defects, and to admire the one without being blindly partial to the other.

I am, &c.

LETTER 63.

On the Literature of Geneva.

TO a man of letters Geneva is particularly intereſting: learning is diveſted of pedantry, and philoſophy united with a knowledge of the world; the pleaſures of ſociety are mixed with the purſuits of literature, and elegance and urbanity give a zeſt to the profoundeſt diſquiſitions. Nor are letters confined in this city merely to thoſe who engage in them as a profeſſion, or to thoſe whoſe fortune and leiſure enable them to follow where genius leads.

Even

Even the lower claſs of people are exceedingly well informed; and there is perhaps no city in Europe, where learning is more univerſally diffuſed. I received great ſatisfaction in converſing even with ſeveral tradeſmen upon topics both of literature and politics; and was aſtoniſhed to find, in this claſs of men, ſo uncommon a ſhare of knowledge. But the wonder ceaſes, when we are told, that all of them were educated at the public academy, where the children of the citizens are taught, under the inſpection of the magiſtrates, and at the expence of government.

One circumſtance in this ſeminary particularly contributes to excite the induſtry and emulation of the ſtudents: prizes are annually diſtributed to thoſe, who have diſtinguiſhed themſelves in each claſs. Theſe rewards conſiſting of ſmall medals, are conferred with ſuch ſolemnity, as cannot fail of producing great effect. A yearly meeting of all the magiſtrates, profeſſors, and principal inhabitants, is held at the cathedral, when the firſt ſyndic himſelf diſtributes, in the moſt public manner, the honorary retributions. I met this morning one of the ſcholars, and, ſeeing his medal, inquired its meaning? "*Je la porte,*" replied the boy,

ſcarcely eight years old, " *parce que j'ai fait* " *mon devoir.*" I required no ſtronger proof to convince me of the beneficial influence upon young minds, from theſe encouraging and judicious diſtinctions, than appeared from this ſprightly ſpecimen.

The citizens enjoy the advantage alſo of having free acceſs to the public library; and by this privilege, they not only retain but improve that general tincture of learning which they imbibe in their early youth.

The public library owes its origin to Bonnivard, prior of St. Victor, who was twice * impriſoned for having aſſerted, againſt the dukes of Savoy, the independence of Geneva; and who conſidered the hardſhips he had ſuffered, and the perils he had eſcaped, as ties that indeared him more ſtrongly to a city, which he had adopted as his own. He was a principal promoter of the reformation by gentle means and gradual inſtruction. He cloſed his benefactions to his beloved city by the gift of his valuable manuſcripts and books, and by bequeathing his fortune towards the eſtabliſhment and ſupport of the ſeminary. His works, which chiefly relate to the hiſtory of Geneva, are preſerved with that

* See p. 98.

care

care and reverence, which are due to ſo eminent a benefactor.

The library contains 25,000 volumes and many curious manuſcripts, of which an accurate and learned catalogue has been lately publiſhed by the Rev. Mr. Sennebier the librarian. He has attempted to determine the ages of the ſeveral manuſcripts; he deſcribes their form and ſize, the materials on which they are written, the ornaments, the characteriſtic phraſes, and mentions the proofs on which he grounds his opinions. He adds alſo the notes, and diſtinguiſhes thoſe which have never been printed.

M. Sennebier has alſo favoured the world with "*Hiſtoire Literaire de Geneve,*" accompanied with biographical anecdotes of thoſe natives, who have been celebrated for their learning. As I ſhould treſpaſs too much upon your time, if I were to attempt ſending you an account of the principal men of letters in Geneva, I ſhall confine myſelf to thoſe only, with whom I am perſonally acquainted.

Charles Bonnet was born in 1720. His life has been devoted to the purſuits of literature, and to the improvement of philoſophy and ſcience. He has proved by his publications, that his indefatigable induſtry in ſearching into the phænomena of the creation, is equalled only by his

his ingenuity in explaining them. His works, printed at Neuchatel, form nine volumes in quarto, or eighteen in octavo, and contain divers ſubjects of natural hiſtory, many accurate obſervations on inſects, on the vegetation of plants, on the uſe of leaves in plants, conſiderations on organized bodies, and the contemplations of nature.

By ſeveral treatiſes, and particularly his Analytical Eſſay on the Faculties of the Soul, he has ſhewn himſelf an acute metaphyſician. Like his friend Haller, he has alſo ſtood forth an able advocate for the great principles of natural and revealed religion. His * Philoſophical Reſearches on Chriſtianity, and his treatiſe on the Exiſtence of God, prove, that an intimate knowledge of nature neceſſarily tends to eſtabliſh a rational belief of thoſe great truths.

I had frequent opportunities of converſing with this reſpectable philoſopher: though now in the ſixty-ſixth year of his age, he poſſeſſes an uncommon degree of vivacity and animation, ſtill retains his enthuſiaſm for the purſuits of

* A tranſlation of his *Recherches Philoſophiques ſur les Preuves du Chriſtianiſme*, has been lately given to the public, by John Lewis Boiſſier, Eſq. under the title of "Philoſophical and Critical Inquiries concerning Chriſtianity."

ſcience,

ſcience, and ſpeaks with the ſame perſpicuity and elegance as are obſervable in his writings.

I was no leſs ambitious of being known to his nephew M. de Sauſſure. Born in 1740; he was elected profeſſor of philoſophy in 1762; and has given to the public the following ſpecimens of his indefatigable induſtry, and of the verſatility of his talents: various remarks and experiments on microſcopic animals; obſervations on electricity; on baſaltic lavas and volcanic productions; on the phyſical geography of Italy. He has invented an inſtrument for meaſuring the degrees of magnetic force; and ſo much improved the electrometer of Cavallo, that it may be almoſt conſidered as a new inſtrument. But above all, his invention of the hair-hygrometer, or an inſtrument for meaſuring the moiſture of the atmoſphere, has enabled him to make many theoretical and experimental reſearches that are detailed in his *Eſſai ſur l'Hygrometre.* And although a controverſy is now ſubſiſting between him and M. de Luc, concerning the propriety of hair as an inſtrument for this purpoſe; yet it cannot depreciate this invention; and new lights muſt be thrown on that ſubject by the oppoſition of two ſuch able naturaliſts.

His *Voyages dans les Alpes*, of which two volumes in quarto have already made their appearance,

pearance, treat of the phyſical geography of the alps, the formation of mountains, the origin of the glaciers, and various phænomena of nature, which peculiarly diſtinguiſh Switzerland. Unlike ſome philoſophers of the preſent age, who from their cabinet, and with no other knowledge of the earth than what is acquired by books, peremptorily and preſumptuouſly decide on the theory of the globe, this indefatigable obſerver draws from repeated travels, and inceſſant experience, a fund of facts, which may enable him to complete the great deſign and object of all his reſearches, that of eſtabliſhing a more perfect theory of the earth.

The cabinet of M. de Sauſſure is an object worthy of the traveller's curioſity. It contains a collection of foreign and Swiſs butterflies; various petrifactions and foſſils, more particularly a large variety of baſalts and volcanic productions; numerous ſpecimens of granites and other primitive ſtones; which he has collected during his various expeditions, and from parts which have been only viſited by himſelf.

M. de Sauſſure has lately reſigned the profeſſorſhip of experimental philoſophy, and is ſucceeded by my very worthy and ingenious friend Mr. Pictet Turretini, who has already diſtinguiſhed himſelf by various publications, which elucidate

date ſeveral important branches of experimental philoſophy.

Paul Henry Mallet, born at Geneva in 1730, paſſed the earlier part of his life at Copenhagen as preceptor to the preſent king, Chriſtian the Sixth. His introduction to the hiſtory of Denmark, under the title of Northern Antiquities, proves him a profound and accurate antiquarian; and his hiſtories of Heſſe, Brunſwic, and Denmark, ſhew him no leſs eminent as an hiſtorian. I ſhould on this occaſion be unmindful of the honour conferred on me, if I omitted to mention, that his lateſt work is a tranſlation of my Travels into Poland, Ruſſia, Sweden, and Denmark, to which he has added many remarks, and a Journey into Norway.

M. de Luc, reader to the queen of Great Britain, and reſident in England, is alſo a native of Geneva. He was born in 1727, and publiſhed, in 1772, his celebrated work on the modification of the atmoſphere, and on the theory of barometers and thermometers: a performance which marks a diſtinguiſhed æra in the hiſtory of experimental philoſophy, and which we are happy to find he is ſtill carrying on under the title of *Idées ſur la Metéorologie.* But in his *Lettres Phyſiques et Morales, ſur l'Hiſtoire, de la Terre et de l'Homme,* M. de Luc appears

to

to ſingular advantage. In this extraordinary performance, he has diſplayed a moſt extenſive knowledge of nature, and has applied it with great ſagacity in forming a new theory of the earth, and in a happy accommodation of his hypotheſis to the Moſaic account of the creation.

The cabinet of M. de Luc is not only remarkable for the number and rarity of many ſpecimens; but more particularly claims the attention of the naturaliſt, as a ſyſtematic collection, tending to illuſtrate his theory of the globe. With this view it may be divided into three principal parts. The firſt part contains petrifactions and foſſils; the ſecond, the collection of ſtones; and the third, lavas and volcanic productions.

The firſt part is arranged in ſuch a manner, under three diſtinct heads, as may enable the naturaliſt, 1. to compare the petrifactions of animals and vegetables with the ſame bodies, which are ſtill known to exiſt in our parts of the globe; 2. to compare thoſe petrifactions of animals and vegetables with the ſame bodies which are known to exiſt in diſtant countries; 3. to conſider the petrifactions of thoſe bodies which are no longer known to exiſt.

The ſecond part comprehends the ſtones under three points of view; 1. thoſe of the primi-

tive

tive mountains, which contain no animal bodies; 2. thoſe of the ſecondary mountains, which contain only marine bodies; 3. thoſe which contain terreſtrial bodies.

In the third part, the lavas and other volcanic productions are diſtinguiſhed into, 1. thoſe from volcanos now in a burning ſtate; 2. thoſe from extinct volcanos.

I am, &c.

LETTER 64.

Government of Geneva in 1776.

THE city of Geneva and its territory were formerly united to the German empire, under the ſucceſſors of Charlemagne: but as the power of the emperors, feeble even in Germany, was ſtill weaker in the frontier provinces, the biſhops of Geneva, like ſeveral other great vaſſals of the empire, gradually acquired very conſiderable authority over the city and its domains; which the emperor had no other means of counterbalancing,

terbalancing, than by increaſing the liberties of the people. During theſe times of confuſion, conſtant diſputes ſubſiſted between the biſhops and the counts of the Genevois; for the latter, although at their firſt inſtitution merely officers of the emperor, and conſidered as vaſſals of the biſhops, yet claimed and aſſerted a right to the excluſive adminiſtration of juſtice. The citizens took advantage of theſe quarrels, and, by ſiding occaſionally with each party, obtained an extenſion of their privileges from both.

But the houſe of Savoy having purchaſed the Genevois, and ſucceeded to all the prerogatives of the counts, with additional power; the biſhops and the people firmly united, in order to oppoſe encroachments, which were no leſs prejudicial to the authority of the one, than to the liberties of the others. During this period, the reſpective pretenſions of the counts, biſhops, and citizens, were ſo various, as to form a government equally ſingular and complicated. The harmony, however, between the biſhops and citizens, was at length broken by the artful management of the counts of Savoy, who had the addreſs to procure the epiſcopal ſee for their brothers, and even for their illegitimate children. By theſe methods, their power in the city became ſo enlarged, that, towards the commence-

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ment of the ſixteenth century, Charles the Third, duke of Savoy, (although the form of government was entirely republican) obtained an almoſt abſolute authority over the citizens, and exerciſed it in the moſt unjuſt and arbitrary manner. Hence aroſe perpetual ſtruggles between the duke and the citizens; the latter continually oppoſing, either by open violence, or ſecret meaſures, his tyrannical uſurpation: thus two parties were formed; the zealots for liberty were called *eidgenoſſen*, or confederates; while the partiſans of the duke were branded with the appellation of *mammelucs*, or ſlaves.

The treaty of alliance, which the town contracted with Berne and Friburgh, in 1526, may be conſidered as the true æra of its liberty and independence: for, not long after, the duke was deprived of his authority; the biſhop driven from the city; a republican form of government eſtabliſhed, and the reformation introduced. From this time, Charles and his ſucceſſors waged inceſſant war againſt the town: but his hoſtilities were rendered ineffectual, by the intrepid bravery of the citizens, and the aſſiſtance of Berne.

In 1584 Geneva concluded a treaty of perpetual alliance with Zuric and Berne, by which it is allied with the Swiſs cantons.

The laſt attempt of the Houſe of Savoy againſt Geneva, was in 1602; when Charles Emanuel treacherouſly attacked the town during a profound peace. Two hundred ſoldiers ſcaled the walls in the night, while the inhabitants were repoſed in unſuſpecting ſecurity; but being timely diſcovered, were repulſed by the deſperate valour of a few citizens, who glorioufly ſacrificed their lives in defence of the liberties of their country. As a tribute of public gratitude for their glorious reſiſtance, theſe brave Genevans were buried with great pomp, and their names are recorded on a ſepulchral ſtone. In memory of this event, ſome of the ſcaling-ladders, by which the enemy entered the town, are preſerved in the arſenal; and alſo the petard, which was faſtened to one of the gates, when the gunner was killed before it could be diſcharged. The war occaſioned by this perfidy was concluded in the following year by a ſolemn treaty: ſince that period, uninterrupted peace has been maintained between the houſe of Savoy and Geneva; although the king of Sardinia did not formally acknowledge, till 1754, the independence of the republic.

No ſooner was peace concluded with the Houſe of Savoy, than the flames of internal diſcord, ſo apt to kindle in popular governments,

and

and which had been ſmothered by their common danger from a foreign enemy, began to appear. During the greateſt part of the laſt century, to the preſent period, the hiſtory of Geneva contains little more than a narrative of contentions between the ariſtocratical and the popular parties. Theſe mutual ſtruggles have been occaſionally exerted with ſo much violence and animoſity, as to threaten, for a moment, a total revolution in the ſtate; but, happily, they have been hitherto compromiſed without producing any fatal effects *.

About the beginning of the preſent century, the power of the Great Council was become almoſt abſolute. In order to reſtrain its authority, the popular party, in 1707, procured an edict, that every five years a general council of the citizens and burghers ſhould be ſummoned, to deliberate upon the affairs of the republic. Agreeably to this law, a general aſſembly was convened in 1712; and the very firſt act exerted by the people in this their collective capacity, was the abolition of the above-mentioned edict.

An event of ſo ſingular a nature, can hardly be accounted for upon the general principle of

* The reader will recollect that this letter was written in 1776, before the late Revolution of 1782, which is related in the ſubſequent letter.

popular fickleneſs and inconſiſtency: accordingly Rouſſeau, in his *Lettres ecrites de la Montagne*, imputes it to the artifices of the magiſtrates; and to the equivocal terms marked upon the billets then in uſe. For, the queſtion propoſed to the people being, "Whether the opinion of the "councils, for aboliſhing the periodical general "aſſemblies, ſhould paſs into a law?" the words employed on the billets delivered for that purpoſe, were, *approbation*, *rejection*; ſo that whichever ſide was taken, it came to the ſame point. If the billet of *approbation* was choſen, the opinion of the councils which rejected the periodical aſſembly, was approved; if that of *rejection*, then the periodical aſſembly was rejected of courſe. Accordingly, ſeveral of the citizens afterwards complained that they had been deceived, as they never meant to reject the general aſſembly, but only the opinion of the councils *.

In conſequence of this extraordinary repeal, the power of the ariſtocracy continued increaſing till within theſe few years; when the citizens, by a ſingular conjunction of favourable circumſtances, joined to an uncommon ſpirit of union and perſeverance, have procured ſeveral changes in the conſtitution of Geneva; by which the au-

* Miſcellaneous Works of Rouſſeau, Vol. iv. p. 279.

thority of the magiſtrates has been limited, and the rights of the people enlarged. Happy! if they know where to ſtop; leſt, continuing to extend the bounds of their own privileges, they ſhake the foundations of civil government, by too much reſtraining the power of the magiſtrates.

The preſent conſtitution of Geneva, may be conſidered as a mean between that of the ariſtocratical and popular cantons: more democratical than any of the former, inaſmuch as the ſovereign and legiſlative authority entirely reſides in the general aſſembly of the citizens; and more ariſtocratical than the latter, becauſe the powers veſted in the Great and Little Councils are very conſiderable.

The members of the Senate, or Little Council of twenty-five, enjoy, in their corporate capacity, ſeveral prerogatives almoſt as great as thoſe which are poſſeſſed by that of the moſt ariſtocratical ſtates. They nominate half the members of the Great Council, ſupply the principal magiſtrates from their own body, convoke the Great Council and the General Council, and previouſly deliberate upon every queſtion which is to be brought before theſe councils: in other words, in them is lodged the power of propoſing; conſequently, as every act muſt originate from

them, no law can paſs without their approbation. In this ſenate is veſted alſo the chief executive power; the adminiſtration of the finances; and, to a certain degree, juriſdiction in civil and criminal cauſes. They nominate, likewiſe, to moſt of the ſmaller poſts of government; and enjoy the ſole privilege of conferring the burgherſhip. They compoſe, moreover, in conjunction with thirty-five members of their own chooſing, the Secret Council, which never aſſembles but by their convoking, and only upon extraordinary occaſions.

Theſe conſiderable prerogatives, however, are counterbalanced as well by the privileges of the Great Council, as by the franchiſes of the General Council. The privileges of the former conſiſt in chooſing the members of the ſenate from their own body; in receiving appeals in all cauſes above a certain value; in pardoning criminals; in diſpoſing of the moſt important charges of government, thoſe excepted which are conferred by the General Council; and in approving or rejecting whatever is propoſed by the Senate to be laid before the people.

The General Council, or aſſembly of the people, is compoſed of the citizens and burghers of the town: their number, in general, amounts to about 1,500, but ſeldom more than 1,200 meet

at

at the ſame time; the remainder being either ſettled in foreign countries, or uſually abſent. I ought to have explained to you ſooner, the diſtinction between *citizens* and *burghers*: the latter, are either the ſons of citizens or burghers *, born out of Geneva, or have obtained the burgherſhip by purchaſe; the former, are the ſons of citizens or burghers, born within the town of Geneva. The burghers may be choſen into the council of two hundred, but the citizens alone can enter into the Senate, and poſſeſs the charges appropriated to that body.

The General Council meets twice a year, chooſes the principal magiſtrates, aſſents to, or rejects, the laws and regulations propoſed by the councils, impoſes taxes, contracts alliances, declares war or peace, and nominates half of the members in the Great Council. All queſtions are decided by the majority of voices; and each member delivers his vote without having the liberty of debating. The reſtriction is certainly reaſonable; for, in a popular aſſembly, like this of Geneva, compoſed of citizens, the meaneſt of whom is well verſed in the conſtitution of the

* The children of thoſe who are employed in foreign countries, in the ſervice of the ſtate, although born out of Geneva, are entitled to all the privileges of citizens.

commonwealth, and where the people in general have a ſtrong propenſity to enter into political diſcuſſions; if every voter was permitted to ſupport and enforce his opinion by argument, there would be no end of debate, and the whole time would be conſumed in petulant declamation.

But the principal check to the power of the Senate, ariſes from the right of *re-election*, or the power of annually expelling four members from the Senate at the nomination of the ſyndics, and from the privilege of *repreſentation*. The right of re-election may be exerciſed in the following manner: the four ſyndics, or chiefs of the republic, are choſen annually out of the Senate by the General Council; and there muſt be an interval of three years before the ſame members can be again appointed. The uſual mode of election is as follows;—The Senate nominates from its own body eight candidates, who muſt be approved by the Great Council; and out of theſe eight, the members of the General Council chooſe the four ſyndics. They have it in their power, however, not only to reject theſe eight candidates, but alſo all the other ſenators ſucceſſively: and in that caſe, four members of the Senate retire into the Great Council, and an equal number

ber of the laſt-mentioned body occupy the places of the degraded ſenators.

With reſpect to the ſecond reſtraint I mentioned upon the power of the Senate, the right of *repreſentation*; every citizen or burgher has the privilege of applying to the Senate in order to procure a new regulation, or of remonſtrating againſt any act of the magiſtracy. Theſe repreſentations have, perhaps, proved one of the principal means of ſecuring the liberties of the people from the reſpective encroachments of the two councils; as they have frequently prevented the magiſtrates from ſtretching their authority to the ſame extent that has been practiſed in ſome other commonwealths of Switzerland. The magiſtrates are obliged to give an explicit anſwer to theſe repreſentations; for, if the firſt is not conſidered as ſatisfactory, a ſecond remonſtrance is preſented. According to the nature and importance of the complaint, the repreſentation is made by a greater or leſs number of citizens; and it has ſometimes happened, that each remonſtrance has been accompanied by ſeveral hundred, in different bodies.

The ſalaries of the magiſtrates are ſo inconſiderable, as not to offer any temptation on the ſide of pecuniary emolument: a ſenſe of honour, a ſpirit of ambition, the deſire of ſerving their country,

country, together with that perſonal credit which is derived from exerciſing any office in the adminiſtration, are the principal motives which actuate the candidates to ſolicit a ſhare in the magiſtracy. Accordingly, the public poſts are generally filled with men of the firſt abilities, and of the moſt reſpectable characters. The revenues of government, at the higheſt calculation, ſcarcely amount to 30,000 pounds a year; a ſum, however, which, by a well-regulated œconomy, is more than ſufficient to defray the current expences: ſo that this republic is enabled to provide for the ſecurity of its ſubjects, from an income which ſome individuals, in other countries, ſquander in pomp and diſſipation.

It is very remarkable that, in a republic ſo free as this of Geneva, and where the true principles of liberty are ſo well and ſo generally underſtood, there ſhould be no preciſe code of penal laws: for, although the form of the proſecution is ſettled, yet the trial of the criminal is private, and the puniſhment left to the deciſion of the magiſtrate. Nor are the franchiſes of the people aſcertained with that accuracy which might be expected. Indeed, under Ademar Fabri, biſhop of Geneva in the fourteenth century, a certain number of political regulations, both civil and criminal, together with ſeveral particular

particular cuſtoms and franchiſes, were drawn up in form; and the biſhop took an oath to obſerve them. Theſe ſtatutes, if they may be ſo called, were alſo confirmed by Amadeus the eighth, duke of Savoy. This code, to which the people appeal in all caſes of controverſy, is compiled in a very inaccurate and confuſed manner, and the magiſtrates refuſe to ſubmit to its authority, becauſe it was publiſhed before the independence of the republic was confirmed. The people have repeatedly demanded a preciſe code of municipal and penal laws, ſo expreſs and determinate, as to prevent the arbitrary deciſion of the magiſtrate; and although ſuch a code was ordered to be compiled in 1738 and 1768, yet its compilation has been hitherto deferred.

The code of civil law is the moſt perfect part of the conſtitution; all matters concerning commerce being well regulated, and private property ſecurely guarded. It is unneceſſary to trouble you with a particular detail of the ſumptuary laws, which are much the ſame as thoſe in moſt of the other ſtates of Switzerland, where reſtrictions of that kind are enforced. But there is one law, relating to bankrupts, too ſingularly ſevere not to be mentioned. If a member of either council becomes a bankrupt, he is immediately degraded;

degraded; and from that moment is rendered incapable of holding any poſt under government, until he ſhall have diſcharged all the juſt demands of his creditors: even his children are ſubjected to the ſame diſgrace; and no citizen can exerciſe any public employment, while the debts of his father remain unpaid.

In this city, as in all the other principal towns of Switzerland, a public granary is eſtabliſhed. Magazines of this kind, uſeful in all ſtates, are more particularly neceſſary in ſo populous a place as Geneva, which, if the neighbouring powers were to prohibit the importation of corn, might be expoſed to the horrors of famine. This corn is dried by means of machines well contrived for that purpoſe, and retailed to the innkeepers and bakers: a conſiderable profit accrues to government; and there is always, in caſe of neceſſity, a ſufficient quantity in reſerve to ſupport the inhabitants during a year and an half.

Geneva is ſtrongly fortified on the ſide of Savoy, and a garriſon conſtantly maintained: but theſe fortifications, and this garriſon, are only ſufficient to guard them from any ſudden attack; but could not be defended long againſt a regular ſiege. The great ſecurity of the republic

republic conſiſts in its alliance with the Swiſs cantons, by means of Zuric and Berne: and, as it is the intereſt both of the kings of France and Sardinia to be in friendſhip with the Swiſs, and to preſerve the independence of Geneva; it derives its greateſt ſecurity from a circumſtance which, in ſome caſes, would be the ſource of danger; namely, that its territory borders upon the dominions of ſuch powerful neighbours.

Geneva is the only republic in Switzerland, which has no regular companies in any foreign ſervice; wiſely prohibiting the enliſting of mercenaries in every part of its territory.

I am, &c.

LETTER

LETTER 65.

Account of the late Revolution at Geneva.—Origin and Progreſs of the inteſtine Troubles.—Siege and Surrender of the Town.—Changes in the Form of Government.—Emigration.—Project for a Genevan Settlement in Ireland—relinquiſhed.

HAVING in a former letter ſketched the general hiſtory of Geneva, and deſcribed the form of government exiſting in 1776; I ſhall now give an account of the late troubles, and relate the changes of the conſtitution in 1782. In this narrative, inſtead of entering into the altercations of party, I ſhall endeavour to develop the principal cauſes which excited the people to take arms, to impriſon ſeveral of the magiſtrates, and, at length, to ſurrender the town, at the moment when they ſeemed moſt determined to defend it to the laſt extremity.

By the edict of 1768, tranquillity was, apparently, reſtored to Geneva, and ſeveral alterations were introduced into the antient conſtitution. By theſe changes, however, the inteſtine troubles were only ſmothered, but not extinguiſhed. The

Negatives, or ariſtocratical party, diſcontented at the right of re-election extorted from them in 1768, which they conſidered as a ſpecies of oſtraciſm, were ready to ſeize the firſt opportunity of obtaining its abolition; while the *Repreſentants*, or partizans of the people, were inclined to puſh their advantages to the utmoſt, and to ſecure their victory by too precipitate an exerciſe of this new privilege.

The project for the compilation of a new code of laws, which, although ordered by the edicts of 1738 and 1768, had been hitherto delayed under various pretences, was another cauſe of miſunderſtanding between the two parties, and was the immediate occaſion of the ſucceeding troubles. Many reaſons induced the Negatives to oppoſe its compilation.

Firſt; An accurate ſtatement of the cuſtoms and uſages would conſiderably diminiſh their prerogatives, by abridging the great diſcretionary powers, which the want of a preciſe code muſt neceſſarily entruſt to the will of the magiſtrates.—Secondly; As, in order to furniſh materials for ſuch a work, it became abſolutely neceſſary to ſearch into the antient archives; it was ſurmiſed, that many titles would be expoſed to the public eye, which would favour the pretenſions of the Houſe of Savoy; and that others would be brought

brought forward by the democratical party, in order to juſtify farther encroachments. The Repreſentants, however, continued to demand the compilation of a new code; and at length, in January 1777, forced the Negatives to conſent to their demand, by excluding, according to their right of *re-election*, four members from the Senate or Little Council. In conſequence of this meaſure, a committee, for the purpoſe of forming a code of laws, was appointed by the concurrence of the Little, Great, and General Councils. This committee was to exiſt two years; and the code was to be laid before the three Councils, for their joint approbation or rejection.

At length, on the firſt of September 1779, the committee ſubmitted a ſketch of the firſt part of this code to the Little and Great Councils, in order to profit by their obſervations, before it was preſented to the General Council. Many articles, however, being conſidered by the Negatives as too democratical, met with great oppoſition: the Senate propoſed to the Great Council, that the Committee ſhould be prorogued for the purpoſe of amending the code; but the Negatives, who formed the majority, decided, that the code ſhould not be accepted, and that the committee ſhould be diſſolved.

This

This meaſure was violently reprobated by one party as unconſtitutional, and ſupported as warmly by the other. By the former it was argued, that the Great Council exceeded its powers; becauſe the Little Council having laid before the Great Council the queſtion, "Whether the powers of the committee ſhould be prolonged?" the latter, inſtead of deciding that point, and *that* only; had determined, "that the code itſelf ſhould not be accepted."—The popular party conſidered this mode of proceeding as an evident breach of the conſtitution: for it was argued, that the Senate alone has the power of propoſing, and the Great Council the privilege of approving or rejecting the motion, and not that of amending or altering it. Further, it was urged, that as the committee had been appointed conjointly by the three Councils, and the code was to be ſubmitted to their approbation or rejection; the Great Council did not poſſeſs the right of cancelling the code, although they had that of diſſolving the committee.

To theſe objections the Negatives anſwered, that the Great Council did not diſſolve the committee; becauſe, being appointed only for two years, it ceaſed of courſe at the expiration of that term; and that as to the neceſſity of ſubmitting the approbation or rejection of the code propoſed

by the committee to the three Councils, it might be urged, that the Little and Great Councils had the ſole prerogative of framing a new code, and of laying it before the General Council; that they had acted inconſiſtently in permitting that Council to have any ſhare in appointing the committee; and, therefore, that they now only uſed their prerogative in reſuming thoſe powers which they had unwarily granted to others.

Many perſons, however, were of opinion, that although the Little and Great Councils poſſeſſed the undoubted right of propoſing to the General Council; yet, as they had once admitted that Council to a ſhare in appointing * the committee, they were imprudent in rejecting the code by their own authority; and ought, at the expiration of two years, to have nominated, conjointly with the burghers, a new committee, for the purpoſes of compiling a code of laws, according to the edicts of 1738 and 1768.

In conſequence of theſe diſputes, the body of

* Strictly ſpeaking, the names of the commiſſioners were not laid before the General Council; but ſimply the propoſal of appointing a committee. The commiſſioners were privately ſettled by the two parties; and the burghers acceded to the propoſition in general terms, as they previouſly knew, that the commiſſioners were moſtly favourable to the popular party.

citizens

citizens remonſtrating againſt this act of the Great Council, that aſſembly offered to undertake the compilation of the code; and to ſubmit it to the public examination. The oppoſite party conſidering this offer as inſidious, many debates took place, and various negotiations were carried on between the two parties, which only ſerved to widen rather than heal the diſſenſions. At length the *Negatives*, conſidering the public tranquillity as endangered, appealed to their guarantees, France, Zuric, and Berne, and entreated them to protect the laws and conſtitution. But this appeal had no other effect than to heighten the diſtruſt and ſuſpicion of both parties. In this criſis of affairs, the *Negatives* redoubled their efforts to ſtrengthen themſelves by the acceſſion of the natives, and to ſpread the ſeeds of jealouſy between the latter and the citizens.

The natives, ſons of the inhabitants, who had purchaſed the right of ſettling at Geneva, formed a numerous body, diſcontented and jealous of many excluſive privileges enjoyed by the citizens, and inflamed with reſentment againſt them, for having, in 1770, baniſhed eight of the principal natives, who, pretending, that the rights of the burgherſhip belonged to the natives as well as to the citizens, demanded, that inſtead of being purchaſed, it ſhould be gratuitouſly conferred.

With a view of acquiring ſo conſiderable an acceſſion to their own party, the Negatives courted the natives by careſſes, ſubſidies, and entertainments, and iſſued a public declaration, that they were ready to confer upon them thoſe privileges of trade and commerce, which had been hitherto excluſively confined to the citizens.

The count of Vergennes alſo openly favoured the deſign of the Negatives, and even wrote diſpatches to the reſident of France at Geneva in order to be communicated to the principal natives, who ſided with the Negatives. Theſe diſpatches contained the higheſt expreſſions of approbation, and ſtrongly recommended them to perſevere in their attachment to that party. The attorney general conceiving this interference contrary to the eſtabliſhed mode of proceeding, which required, that all diſpatches from a foreign miniſter ſhould paſs through the hands of government, delivered to the Great Council a ſpirited remonſtrance, diſplaying the danger which reſulted from a private correſpondence between the court of France and the natives. He artfully, indeed, ſurmized, that the report of the diſpatch from the French miniſter to the natives, was falſe and inſidious, and calculated to raiſe a miſunderſtanding between that power and the republic; and even advanced ſeveral arguments, which tended

to prove the impoſſibility, that ſuch an extraordinary correſpondence could have been maintained.

The irony and ſpirit of this remonſtrance were ſo offenſive to the count of Vergennes, that he inſtantly obtained the depoſition of the attorney general; and this public ſtep in favour of the Negatives conſiderably increaſed their party among the natives.

In order to counterbalance the offers of the Negatives and the favour of France, the Repreſentants manifeſted the moſt generous intentions in behalf of the natives; and even promiſed, what they had hitherto reprobated in the ſtrongeſt manner, to facilitate the acquiſition of the burgherſhip, and to beſtow it as the recompence of induſtry and good behaviour.

Thus the two parties ſtriving who ſhould offer the higheſt terms, two factions were formed among the natives; and it was eaſy to foreſee, that the firſt opportunity of recurring to force would be ſeized by the populace; many of whom had nothing to loſe, and much to gain in times of tumult and confuſion.

In effect, ſuch an opportunity preſented itſelf on the 5th of February 1781; when a particular quarrel brought on a general riſing. Two neighbouring and oppoſite parties of natives, caſually diſputing, loaded each other with virulent re-

proaches; and from reproaches would have immediately proceeded to an aſſault, if the Syndics on one ſide, and the chiefs of the Repreſentants on the other, had not quelled, by their preſence, the riſing tumult. The populace aſſembled on the occaſion began to diſperſe; when a diſcharge of muſketry was heard from the arſenal. Several youths, who ſided with the Negatives, having taken poſſeſſion of the arſenal, had fired *, by miſtake, on ſome natives of their own party, killed one of them and wounded another. This diſcharge was conſidered by the Repreſentants as the ſignal of a general inſurrection. They inſtantly took arms, and marched, in three columns, to the arſenal; where, finding only a few young men, who had raſhly fired without orders, they prudently reſtrained their reſentment, and permitted the others to retire without moleſtation. They then continued under arms, and occupied the principal avenues of the city.

The next morning the committee of the Repreſentants being ſummoned by the natives to fulfil their promiſes of granting additional privileges, and particularly of gratuitouſly conferring the burgherſhip, held ſeveral meetings with the

* It is but juſtice to the Negatives to add, that, according to the opinion of ſome, this firſt inſurrection was concerted, and the Repreſentants fired firſt.

principal

principal Negatives on that ſubject, but without ſucceſs: for the latter, while they readily conſented to the requeſt of the natives reſpecting the augmentation of their commercial privileges, poſitively refuſed to facilitate the acquiſition of the burgherſhip.

Notwithſtanding this refuſal, the committee, embarraſſed and alarmed at the number and threats of the natives, determined to abide by their promiſes, drew up an edict, which permitted the natives to carry on trade, and to hold the rank of officers in the military aſſociations; and conferred the burgherſhip on more than a hundred perſons, taken from the natives and inhabitants, and even from the peaſants of the territory. This edict was laid before and approved by the three Councils; the Negatives abſenting themſelves on this occaſion from their apprehenſions of the popular party, who had made themſelves maſters of the city. By this meaſure the Repreſentants eſteemed themſelves ſecure of having inviolably attached the natives to their intereſt, and concluded, that nothing more remained than to enjoy the fruits of their victory. Affairs, however, turned out otherwiſe; deputies being diſpatched from Zuric and Berne in order to mediate between the rival parties, prevailed on the Repreſentants to lay down their arms; and before their departure declared the edict in favour of the natives to be

null and illegal. And when the queſtion for executing that edict was laid before the Senate, it was repeatedly carried in the negative, under the juſt pretence, that the mediating powers had declared it to be illegal; that while the city was in the power of the Repreſentants, who were under arms, none of the members could venture to oppoſe it; and that therefore their aſſent, which had been extorted by fear, was abſolutely null.

Inflamed by this refuſal, the oppoſite party tendered, on the 18th of March 1782, another repreſentation, in which they again ſummoned the magiſtrates to confirm the edict. The anſwer, expected with the moſt extreme impatience, was at length returned on Sunday the 17th of April, and concluded with ſaying, "Government is neither willing nor able to ratify the edict."

Although the committee endeavoured firſt to conceal, and when that was impoſſible, to ſoften and palliate its contents, yet the generality of the natives, who found themſelves excluded from the favourite object of their wiſhes, at the moment when they ſeemed moſt ſecure of obtaining it, crouded tumultuouſly in different parts of the city; repeating, one after the other, in a kind of frenzy, "Government is neither able nor willing to ratify the edict." As theſe cries of deſpair were followed by the moſt violent menaces; the popular chiefs, after ſeveral vain attempts to reſtrain

ſtrain the riſing commotions, acquainted the magiſtrates with the general indignation; and endeavoured, though without ſucceſs, to perſuade them to recal or mollify their fatal anſwer. Mean while, night approached, ever favourable to tumults and inſurrections, and brought on the criſis which ruined the republic.

Some of the loweſt populace having ſet fire to a wooden barrack, cried out, "to arms;" on which ſignal the natives aſſembled in a tumultuous manner, and were joined by the moſt violent Repreſentants. The moſt moderate among the citizens, well convinced, that the fire was only a pretext, and that ſuch an ill-timed inſurrection would greatly prejudice their cauſe, diſperſed themſelves in various quarters of the town, and tried to prevail on the mob to retire; but without effect. Many were wantonly inſulted; and a party, in attempting to ſecure one of the gates, having fired on the garriſon who reſiſted, it became abſolutely neceſſary for the citizens either to abandon the natives, or to join them in the inſurrection. Having haſtily adopted the latter meaſure, the officers of the popular party made their appearance, took poſſeſſion of the town, and appeaſed the tumult. At length, after various unſucceſsful negotiations to prevail on the Negatives to ratify the edict, the popular

popular party arreſted and confined a few of the magiſtrates and the principal Negatives; and the chiefs of the Repreſentants, apprehenſive that an immediate appeal to France would be the firſt conſequence of their liberty, detained them in priſon as hoſtages for their farther ſecurity.

As this arreſt and impriſonment of the principal magiſtrates appeared a meaſure as daring and atrocious as contradictory to ſound policy; it may be proper to conſider on what principles the Repreſentants acted, and by what arguments they defended their conduct. For this purpoſe it will be neceſſary to view the political ſituation of Geneva in the moment of this inſurrection, with reſpect to the neighbouring ſtates, and particularly in relation to France, of whoſe aſſiſtance the ariſtocratical party was ſecure, as ſoon as that power could interfere with effect and propriety.

The act by which France, Zuric, and Berne guarantied the conſtitution of Geneva, as new-modelled in 1768, was no longer in force; a circumſtance highly unfavourable to the popular party. For, as by this act, the king of France could not publicly interfere in the affairs of Geneva, except in concert with Zuric and Berne, he had only one voice; and conſequently could not effectuate any change in the government, provided thoſe two cantons were united againſt him,

him. Theſe ſhackles being highly diſpleaſing both to the court of Verſailles, and to the Negatives, who were protected by that court, the count of Vergennes, by a letter written on the 28th of September 1781, declared to the cantons of Zuric and Berne, that Louis the Sixteenth renounced the guarantee, becauſe they had refuſed to enter into views for the purpoſe of reſtoring peace to Geneva; and in a diſpatch to the Senate, bearing the ſame date, and to the ſame effect, he added, that the king, in renouncing the guarantee, did not withhold his protection from the commonwealth; but ſtill reſerved to himſelf the power of puniſhing the diſturbers of public tranquillity, and of ſupporting the conſtitution. The greateſt number of the Repreſentants weakly rejoiced at this meaſure, from an idle perſuaſion, that the miniſter, fatigued with their trifling diſputes, and deſpairing to overcome the perſeverance of the citizens, abandoned them to themſelves; and, thus in the very act which inevitably prepared ſubjection, imagined, that they ſaw the firſt gleam of abſolute independence.

Soon after this renunciation, M. de Vergennes ordered a regiment to march into the land of Gex, which borders on the territory of Geneva; and the troops were ſtill quartered on the frontiers, when the refuſal of the Senate to confirm the

edict

edict gave riſe to the inſurrection. In this ſituation, the popular leaders argued, that for a long time a pretext had been wanted to appeal to Verſailles; and it was now found: they dreaded every moment to ſee the French troops at the gates of the town; they thought it therefore moſt adviſeable to arreſt and confine the magiſtrates, in order to intimidate them from calling in the ſuccours of France, and to render them reſponſible for the public ſecurity.

Won over by theſe ſpecious arguments, the body of citizens continued to act as if their power was likely to be permanent. They depoſed ſeveral members of the Great and Little Councils, and appointed in their place an equal number of perſons who were favourable to the cauſe of the Repreſentants. The Great Council thus new-modelled, executed the edict for conferring the burgherſhip on the ſtipulated number of natives; and appointed a committee of ſafety, compoſed of eleven members, with very conſiderable authority. This committee entirely re-eſtabliſhed public tranquillity, ordered the fortifications of the town to be repaired, and inſpired the people with the moſt dangerous confidence in their own ſtrength.

Zuric and Berne, on the firſt news of the late inſurrection, interdicted their ſubjects from all intercourſe

intercourſe with a government founded on uſurpation and violence, and ſtrenuouſly adviſed the Syndics to exhort the citizens to an immediate reſtoration of the legal conſtitution: a moment's delay, they urged, would be inevitable ruin. A few days afterwards the French miniſter returned unopened the diſpatches of the new Senate, and reminded the citizens of the king's ſolemn engagement to ſupport the oppreſſed, and to protect the antient form of government. The citizens of Geneva, though thus deſerted by their allies, were deaf to all admonitions, idly appealed to the juſtice of their cauſe, and diſclaimed all overtures of accommodation except on their own terms.

During two months the citizens and natives, apparently ſecure within their ramparts, convinced either, that France durſt not venture to attack them, or that the priſoners would be the immediate victims of ſuch an attempt, and that they ſhould be able to make a long and glorious reſiſtance, would not even liſten to any propoſal of re-eſtabliſhing the depoſed magiſtrates; and could not be prevailed upon to ſacrifice a part of their privileges, and particularly the right of re-election, for the ſecurity of the remainder.

At length, the ſtorm gathering from all quarters, ſlowly approached, and hovered over the town.

town. The king of Sardinia and the canton of Berne, both ſeconding the views of France, diſpatched troops againſt Geneva; and their reſpective generals, Meſſrs. de la Marmora and Lentulus, were ordered to act in concert with the French commander M. de Jaucourt, who had advanced to the frontiers at the head of a conſiderable detachment.

Nothing occaſioned more ſurpriſe and indignation than the junction of Sardinia and Berne with the King of France; and yet no meaſure was more conſonant to the views of thoſe two powers.

The Sardinian monarch was intereſted in the preſervation of a town, which is the chief ſource of induſtry and wealth to his ſubjects of Savoy; and whoſe inteſtine troubles had already cauſed a diminution of his revenue: and as he could not in common policy permit the French to increaſe their influence in theſe parts, and to quell, without his interference, the commotions of Geneva, he *voluntarily* tendered his aſſiſtance towards the accompliſhment of ſo beneficial a purpoſe.

The Canton of Berne, deſirous to prevent the interpoſition of foreign powers in the affairs of Switzerland, uſed, in a letter to the Syndics, the following exhortations. "Redouble your efforts "with your fellow-citizens; and exert yourſelves "in

" in order to compoſe the unhappy differences,
" which muſt infallibly terminate in the deſtruc-
" tion of the republic. A ſpeedy re-eſtabliſh-
" ment of the legal government will reſtore to
" them their faithful allies, who are anxious to em-
" ploy their good offices in behalf of the ſtate."
But when theſe well-timed admonitions proved ineffectual, and the perſeverance of the citizens had drawn upon them the reſentment of France and Sardinia; Berne could not tamely behold two ſuch powers thus interfering in a criſis ſo important to her own particular welfare, and to the general intereſts of the Helvetic union; and, as Zuric had prudently declined to take an active part againſt her antient ally, ſtood forth with that firmneſs and deciſion which characteriſe all her councils, and joined her forces to the confederate armies of France and Sardinia.

Notwithſtanding this powerful combination, and even in the midſt of theſe threatening appearances, the Genevans continued to repair the ramparts with indefatigable ardour. The peaſants of the territory flocked of their own accord, and without pay, to mount guard, and to work at the fortifications; women, of all ranks, crouded to the ramparts, as to a place of public amuſement; encouraging and animating the men to perſevere in their labour, and ſome even ſharing

in their fatigue aſſiſted in tranſporting burdens, or in planting cannon on the baſtions. In the midſt of this almoſt univerſal confidence, a few prudent perſons, who foreſaw the impoſſibility of reſiſtance, ſighed in ſecret; but were obliged to diſguiſe their real ſentiments, and could not venture in public but with an air of hope, ſerenity, and fortitude.

Mean while the beſiegers advancing on all ſides, the three commanders held frequent conſultations, and formed a general plan of attack. At length, on the 29th of June 1782, M. de Jaucourt diſpatched a meſſage to the Syndics; in which, after expatiating on the diſintereſted intentions of the king his maſter, and proteſting that he reſpected the independence of the republic, and was only deſirous of introducing good order, he added, that if they would not admit his troops, and accept the following preliminaries of peace, he muſt force his way into the town. Among other conditions, he exacted, that no perſon ſhould appear in the ſtreets, under pain of military puniſhment; that a certain number of citizens, among whom were all the chiefs of the Repreſentants, ſhould in twenty-four hours retire from Geneva; that all arms ſhould be delivered to the three generals; that the depoſed magiſtrates ſhould be inſtantly re-eſtabliſhed; and

that

that a final anſwer ſhould be returned in two hours. The generals Lentulus and de la Marmora reſpectively inſiſted on the ſame conditions.

It is impoſſible to expreſs the rage, indignation, and deſpair, which theſe humiliating conditions excited at Geneva. Without the leaſt deliberation every perſon reſolved to periſh rather than accept them; and the moment of danger had no other effect than to animate and rouſe the courage of the beſieged. While they hurried to the ramparts, and were preparing for reſiſtance, the Syndics ſecretly obtained from the three generals a delay of twenty-four hours. In this interval not only the men of all ages prepared for defence; but even women and children tore the pavement from the ſtreets, and carried the ſtones to the tops of the houſes, in order to roll them down upon the enemy, in caſe they ſhould force their way into the town.

Such was the general ardour; that about eighty women and girls, dreſſed in uniforms, offered to form themſelves into a company, for the purpoſe of defending their country. The committee of ſafety accepted their ſervices, and placed them in a barrack, which by its ſituation was covered from the cannon of the beſiegers. Theſe amazons, with a ſpirit above their ſex, refuſed a ſta-

tion that was not ſufficiently expoſed; and, as the town ſoon afterwards ſurrendered, they had no opportunity of proving their patriotiſm by a diſplay of their valour.

All theſe various ſigns of the moſt determined reſolution, flowing unanimouſly from every rank, age, and ſex, alarmed the Negatives, who never had ſuſpected, that the people would carry matters to ſuch deſperate extremities. Accordingly, their partiſans conferred with the moſt moderate among the Repreſentants, in order to find ſome means of reconciliation; but without ſucceſs.

At length the fatal hour arrived, in which the anſwer was to be returned: it was to expire at ten on Sunday morning; and at the firſt beat of the drum the ramparts were covered with defenders. Although the moſt zealous had only calculated on 3000, above 5000 made their appearance. They ſeemed to be all animated with one and the ſame ſpirit; and reminded each other of thoſe brave citizens of Geneva, who by ſacrificing their lives had repulſed, in 1602, the troops of Savoy, when the latter had treacherouſly ſcaled the walls during a profound peace. No one ventured even to hint at ſurrendering; and all awaited the attack with the moſt determined intrepidity. In this criſis, the French general, at the interceſſion of the Negatives, alarmed for the fate of the priſoners,

priſoners, again prolonged the period preſcribed for the capitulation.

The firſt effect of theſe repeated delays was gradually to abate the enthuſiaſm of the women: they could not but feel that they were wives and mothers; and began to figure to themſelves all the horrors of a town taken by aſſault, and a prey to a licentious and enraged ſoldiery. In the next place, timid and prudent perſons could venture to conceal their fears under various pretences; and at length the committee of ſafety, hitherto ſtrenuous in enforcing the neceſſity of reſiſtance, ſuddenly changed their reſolution, but artfully diſguiſed their ſentiments from the public, until it was too late to prevent the ſurrender.

In the preſent ferment of paſſions and prejudices, if the leaders had openly propoſed a ſurrender, they would have been conſidered as traitors; they would only have endangered their own perſons, and accelerated thoſe calamities which they wiſhed to avoid. For the purpoſe, therefore, of gradually bringing matters to the iſſue which they intended, they aſſembled the citizens in the reſpective circles; and after warmly extolling their general zeal and patriotiſm, repreſented, that if the city ſhould be attacked in the night, it would be no longer poſſible to convene them. For this reaſon they hinted, that it

would be highly advantageous to the common cauſe, if each circle ſhould nominate ſeveral deputies, with full authority to decide in their ſtead; adding, that they ought rather to appoint thoſe perſons, who, from their age and reſpectable character, could aſſiſt their country by advice, while others were defending it by their valour.

This council, compoſed of about a hundred citizens, met at ſix in the evening, on the firſt of July, a few hours before the laſt term appointed for the ſurrender was about to expire. The chiefs opened the debate with long ſpeeches, in order to prepare the minds of the aſſembly for the object which they had in view. After having repreſented the ſtate of the fortifications, which were judged by the moſt intelligent engineers to be only ſufficient for reſiſting an attack by ſtorm, and not for maintaining a ſiege of more than three or four days; they at length ventured to lay before them the neceſſity of an immediate ſurrender. On the bare mention of that word, the moſt violent of the aſſembly inſtantly burſt into reproaches, and accuſed the committee with an intention of betraying the republic. They declared, that they would inſtantly announce to their fellow citizens the treachery of their deputies, who were not appointed to deliberate upon a ſurrender,

but

but only upon the means of moſt effectual reſiſtance. Apprehending the ill conſequences of ſuch a proceeding, one of the chiefs ſtarted from his ſeat, and barred the doors; while ſome of thoſe who wiſhed to retire, drew their ſwords, and ſhedding tears of deſpair, "To remain," they cried out, "a moment, was to ſhare the treaſon, and to deſtroy their country." Every method was attempted to appeaſe them: cries and exhortations were heard from all quarters.

At length, when the queſtion concerning the ſurrender was propoſed, a conſiderable majority voted for defending the city to the laſt extremity. On this determination, many of the moſt zealous, truſting to this decided majority, retired from the aſſembly, in order to prepare themſelves for the hour of danger. Another conſultation was then propoſed by thoſe who remained; the danger of dividing into parties, and of alienating the citizens from their leaders, was repreſented in the ſtrongeſt colours. Theſe ſuggeſtions being attended with effect; long debates recommenced. One of the youngeſt in the aſſembly, being affected with the pathetic conſideration of the diſtreſs of thoſe widows and orphans, whoſe huſbands and fathers ſhould fall by the hand of the enemy, was of opinion, that only thoſe who were

unmarried, and who had no children, ſhould be permitted to defend the ramparts. " We are not ſufficient," he added, " to preſerve the town from being taken; but enough to ſave our honour, and to obtain a leſs humiliating capitulation." He was interrupted by an elderly citizen, who claimed for fathers of families the glory of fighting for their country. " I have ſix ſons," exclaimed he, with tears of exultation ſparkling in his eyes, " and who ſhall prevent me from marching at their head to the ramparts ?"

It was then propoſed to conduct the hoſtages in the face of the French batteries, as a means of intimidating M. de Jaucourt from firing againſt the ramparts; for it was to be preſumed, that he would not expoſe to certain deſtruction thoſe magiſtrates whom he came to deliver. This opinion, which for a ſhort time ſeemed likely to prevail, gave place to the more generous reſolution of reſtoring the priſoners to liberty, permitting the Negatives to retire to the enemy's camp, and then of preparing for a vigorous reſiſtance. It was urged, ſuch a noble mode of proceeding, in ſo alarming a moment, would probably ſoften the reſentment of the ariſtocratical party, and induce them to obtain from the French general more favourable terms of accommodation.

Many

Many hours were conſumed in diſcuſſing theſe various opinions. The fatal period approached: it was midnight; and the chiefs, who had now contrived to ſtrike the greateſt number with a panic, won over the aſſembly to their ſentiments, by propoſing a general emigration; and conſoled them, in the midſt of their deſpair, with the hopes of enjoying that liberty in another country, which they could no longer expect to find in their own.

A declaration being then drawn up, to be delivered to the Syndics at the ſame time with the keys of the city; the hoſtages were inſtantly conducted to their reſpective houſes; the chiefs ſummoned the principal officers from their poſts, ordered the cannon of ſeveral batteries to be rendered unfit for ſervice, and at length provided for their own ſafety by retiring from the town before the entry of the confederate troops.

When the unexpected news of the ſurrender was announced to the public, they became frantic with deſpair. Some mutually embraced each other without uttering a ſingle word; others loaded their chiefs with the moſt dreadful imprecations; while a few, ſtill determined to reſiſt, ineffectually ſummoned their fellow citizens by beat of drum to their ſtandards. The greateſt

part, however, having diſcharged and broken their muſkets, flung themſelves with their faces to the ground, and lay motionleſs for a conſiderable time. At length a general retreat took place. The roads were covered with perſons of both ſexes, who fled haſtily from the walls; and the Sardinians, who firſt entered the gates at five in the morning, found the city almoſt deſerted.

The count de la Marmora, as if actuated by motives of compaſſion for the degraded ſituation of Geneva, marched in ſilence, and without an inſulting diſplay of military pomp; and, having occupied the town-houſe and the magazines for powder, viſited in perſon the different quarters of the city, in order to diſſipate all apprehenſions of danger. About noon the two other commanders made their entry: they were accompanied by a large body of Negatives, and marched at the head of their reſpective troops, with drums beating and colours flying. Having joined the Sardinian forces, the three generals conducted the magiſtrates, lately delivered from priſon, to the Great Council, and re-eſtabliſhed them in their ſeveral charges, to the ſound of martial muſic. The citizens were diſarmed; each houſeholder obliged to furniſh the officers with quarters; the edict of the 6th of February 1781, which had conferred the

the burgherſhip on above a hundred natives, was annulled. In the midſt of theſe arrangements, the Great Council laid, with all due form, the foundation of a theatre: a troop of comedians was introduced; and the ariſtocratical party celebrated their triumph with balls, feaſts, and every ſpecies of public diverſion.

Mean while a committee appointed by the Great and Little Councils prepared, in concert with the three generals, an edict for new modelling the conſtitution, which being approved at the courts of Verſailles and Turin, and by the canton of Berne, was confirmed by the Great and Little Councils. But as it annulled many conſiderable rights hitherto enjoyed by the citizens, it was not probable, that it would be ratified by the General Council, in which the party of the Repreſentants had ſtill a great majority. In order, therefore, to obtain its final confirmation, it was enacted, that, when the edict was laid before the General Council, thoſe Repreſentants, who had taken up arms, ſhould for that time be excluded; under pretence, that the inſurrection had rendered them unworthy of exerciſing their rights; and it was added, that they might eſteem themſelves extremely fortunate in not being expoſed to the utmoſt rigour of the laws.

Accordingly,

Accordingly, on the 15th of November 1782, the members of the General Council aſſembled to the number of five hundred; above a thouſand being excluded from giving their votes. And yet even this ſantom of ſupreme power was ſurrounded with troops. Notwithſtanding, however, the excluſion of ſo many, and the general panic, above a hundred Repreſentants, and even ſeveral Negatives, had the courage to reject the edict; which appeared to many, even among the Negatives, as eſtabliſhing too rigorous an ariſtocracy.

The citizens of Geneva have incurred much ridicule and cenſure, for having ſo early and repeatedly expreſſed the moſt determined reſolution never to ſurrender the town, and to reſiſt until it was taken by aſſault. In a pamphlet, alſo, ſtyled "*Lettre écrite des ramparts de Geneve,*" the author combats all the arguments which might be urged in favour of a capitulation, and vehemently aſſerts, that he, as well as his fellow citizens, are reſolved to defend the town to the laſt extremity, and rather to court death from the hands of the enemy than ſurvive the extinction of their liberties. Theſe aſſertions appeared mere oſtentatious vaunts, as the pamphlet was not printed and diſperſed until after the ſurrender; and

and led the public to attribute vain-boaſting and cowardice, which are uſually united, as eſſential characteriſtics of the people of Geneva.

On reviewing, however, the hiſtory of the revolution with impartiality, it cannot admit a doubt; that the people were unanimouſly againſt a ſurrender; that, till within a few hours before the confederate troops entered the gates, they expected, and were prepared for, an aſſault; that they had entruſted the command to the committee of ſafety; that the latter, alarmed at the near approach of danger, had ſuddenly changed their opinion, had betrayed them into a ſurrender againſt their intentions, and without their knowledge, and had taken ſuch precautions as rendered all reſiſtance impracticable.

As the committee has been greatly cenſured for this ſudden change of opinion; it is but juſtice to add, that of eleven members and ſeveral adjuncts, who compoſed the committee, two thirds voted againſt the ſurrender. But in fact, of what avail was reſiſtance at this period? Upon a ſuppoſition that the ſiege could have been protracted for a few days; the kings of France and Sardinia, and the canton of Berne, had freſh troops ready to march; and in leſs than a week ſo large a reinforcement would have been collected before the gates of Geneva, that any further

oppoſition

oppoſition muſt have been madneſs. In a word, the popular leaders acted wrong in buoying up the hopes of people, that reſiſtance could be effectual; and by the reparation of the ramparts only ſerved to inſpire the public with a dangerous confidence, which they were not afterwards able to diſſipate.

Such is the hiſtory of this extraordinary revolution; prepared for ſome time by the enmity of the two parties; occaſioned by the impolitic tho' juſt demand of a code of laws; haſtened by the two inſurrections; and completed by the intrigues and arms of France. It muſt be acknowledged, that the Repreſentants, or popular party, acted in a moſt imprudent as well as unconſtitutional manner; and particularly, that no excuſe can be admitted for the ſecond inſurrection, and the impriſonment of the magiſtrates. The Repreſentants, by the edict of 1768, poſſeſſed great privileges, which in time would have placed in their hands the whole adminiſtration of government. As the greateſt number in the General Aſſembly, they enjoyed the right of annually excluding four members from the Senate, and of filling half the vacancies in the Great Council; they muſt, therefore, in a few years, have inevitably obtained a decided majority. The moſt prudent among them ſaw this advantage, and were

were contented; but the greater part, and perhaps a few of their leaders, eager to graſp immediately that power, of which they had only a diſtant proſpect, precipitated meaſures; and acting, in a few inſtances, diametrically oppoſite to the firſt principles of their conſtitution, haſtened its deſtruction. It muſt, at the ſame time, be confeſſed, that however imprudently or unconſtitutionally the Repreſentants acted, yet that the Negatives, ſecure of ſupport from the Court of Verſailles, ſeemed to carry their confidence in their own ſtrength to ſuch a degree, as almoſt to court the troubles which enſued; and that they have availed themſelves of their victory to a degree only to be palliated by abſolute neceſſity. A new form of government introduced by force, muſt be ſupported by force; by calling in the aſſiſtance of France, they muſt be entirely ſubmiſſive to that power; and by annihilating the firſt principles of liberty, in diſarming the citizens and forbidding all public meetings, they are in danger of extinguiſhing that ſpirit of emulation and energy for which the Genevans have long been diſtinguiſhed. Having eſtabliſhed a rigorous ariſtocracy, they muſt neceſſarily adopt that jealouſy and ſuſpicion which not unfrequently characteriſes the magiſtrates under that ſpecies of government: and the only queſtion now remaining,

ing, is, Whether the above-mentioned ſpirit of emulation and energy will be diminiſhed by the change of conſtitution; and if ſo, whether that diminution will be counterbalanced by the introduction of a greater degree of tranquillity than is uſually to be found in democratical ſtates?

The changes in the form of government, introduced by this revolution, are principally comprized in the following articles.

1. The power granted in 1768 to the General Council, of re-election, or of annually excluding four members from the Senate, is aboliſhed.

2. The privilege enjoyed by the ſame aſſembly, of nominating half the vacancies in the Great Council, is likewiſe annulled; and that body is now ſupplied by the Senate and Great Council, according to the following complicated mode of election:—In caſe of ſixteen vacancies, the Great Council ſelects eight members from ſixteen candidates propoſed by the Senate; and in like manner the Senate chuſes eight from the ſame number of candidates appointed by the Great Council.

3. The right of *repreſentation*, or remonſtrating, is taken from the citizens at large, and transferred to thirty-ſix adjuncts, who may be

preſent in the Great Council, on the firſt Monday of each month: they enjoy the privilege of making repreſentations, and in that caſe have a deliberative voice. But, as they are removeable every year; and are drawn by lot from all the citizens in general, who may chuſe to preſent themſelves as candidates; they are conſidered as ſo extremely dependent on the will of the magiſtrates, and their repreſentations have ſuch little weight, that they are called in deriſion, *Les Images*, or The Shadows.

4. The introduction of the *grabeau*, or annual confirmation of the members of the Senate, and of the Great Council, excluſively veſted in the laſt-mentioned body. This law, which may be conſidered as the baſis of the new conſtitution, has transferred to the Great Council part of the authority both of the Senate and of the General Council. By ſubjecting the Senate to this annual reviſion, it has rendered that body greatly dependent on the Great Council, which by the preſent conſtitution is become, what the Senate was according to the form of government eſtabliſhed in 1738 and 1768, the center of the ariſtocracy.

5. The circles, or clubs, in which the citizens uſed to be convened, and all public aſſemblies,

blies *, are prohibited; and they are only allowed to meet at coffee-houſes. This prohibition was at firſt carried to an extreme degree of jealouſy, highly derogatory from every principle of free government; but lately it has been ſomewhat modified; and aſſemblies are permitted to be held in the country, though not within the walls of Geneva.

* One inſtance of the ill effects ariſing from this prohibition, fell under my obſervation: The Society of Arts in Geneva, many of whoſe members are perſons of great abilities and learning, has already given to the world ſeveral intereſting publications. But as all public aſſemblies are prohibited, government was ſuſpicious leſt this literary ſociety ſhould indulge itſelf in political queſtions; and accordingly no meeting has been held ſince the late revolution. Indeed, when I was at Geneva, it was then in agitation to ſuffer the ſociety to aſſemble; but it was very uncertain whether this permiſſion would be granted; and if granted, whether it would not be greatly fettered by the diminution of the number of its members, and by ſeveral other reſtrictions, incompatible with the freedom of literary diſquiſitions. It is a matter of little conſequence to Europe in general, whether the government of Geneva is more or leſs ariſtocratical or democratical; but it is an object of general importance, whether a literary ſociety ſhould be prevented, by political jealouſy, from holding thoſe aſſemblies, which will afford a means and opportunity of continuing to ſupply the world with learned and intereſting publications.

6. The

6. The militia is aboliſhed; firing at marks, even with bows and arrows, prohibited; and the guard of the town, inſtead of being conſigned to the citizens, is entruſted to a garriſon of 1000 foreign ſoldiers, whoſe colonel and major are both foreigners: theſe troops take an oath of fidelity to the republic, and of obedience to the Great Council, and to the Committee of War; they are under the immediate command and inſpection of the latter, and ſubject to the ſuperior controul of the former. This garriſon may be augmented to 1200, and reduced to 800 men, at the will of the Great Council; but cannot be further enlarged or diminiſhed without the conſent of the General Council.

7. No citizen, native, or inhabitant, is permitted to have arms. It is not unworthy of remark on this article, that although by the antient conſtitution every citizen was obliged to provide himſelf with arms, under a certain penalty; yet, that when theſe were delivered up, government did not reimburſe the expence.

8. Several taxes were impoſed without the conſent of the General Council; but for the future, every change or augmentation of the revenue muſt be ſubmitted to that body.

9. Various privileges, reſpecting the equal

rights to trade and commerce, formerly poſſeſſed by the citizens alone, have been conferred on the natives and inhabitants; a liberal conceſſion, to which both parties willingly acceded.

POSTSCRIPT.

THE Genevans ſeemed ſo greatly to deplore the diminution of that liberty to which they had long been accuſtomed, and to which they aſcribed the late remarkable increaſe of their population and riches, that if we had judged from the diſcontents and conſternation of the citizens, we might have concluded the change of government would have been followed by an almoſt general emigration. The event, however, has not juſtified this concluſion. Excepting the principal leaders, thoſe of the popular party who were baniſhed, and a few others who renounced their country in compliance with their political principles; the greateſt part of the emigrants returned, and again ſettled in the place of their nativity. And perhaps it may be affirmed with truth, that the late revolution has ſcarcely driven ſix hundred perſons from Geneva.

The emigrants have principally eſtabliſhed themſelves at Bruſſels and Conſtance *; where

* See Letter 3.

they

they have introduced manufactures of printed linens and watch-making.

I cannot quit this ſubject without recalling to your recollection, the plan for giving an aſylum to the Genevan emigrants in Ireland, which ſo long engaged the public attention.

Soon after the revolution, a memorial ſigned by above a thouſand Genevans of both ſexes, who were either perſons of ſome property, or verſed in trade or manufactures, expreſſing a deſire of ſettling in Ireland, was preſented to Earl Temple (now Marquis of Buckingham) then Lord Lieutenant of Ireland. His Excellency, conſcious of the advantage which muſt reſult to Ireland from the reception of ſo many induſtrious artiſts, many of whom poſſeſſed property in the Engliſh, Iriſh, and French funds, communicated, on the 27th of September 1782, the propoſal to the Privy Council of Ireland for giving an aſylum to the Genevan emigrants. This propoſal, patronized by the Lord Lieutenant, and unanimouſly conſented to by the Privy Council, was approved by the King. The nobility and gentry of Ireland ſeemed to vie with each other in countenancing the ſettlement; the Iriſh parliament voted £. 50,000 towards defraying the expences of their journey, and building a town for their

reception; lands were purchaſed for £. 8000 in a convenient ſituation near Waterford; part of the New Geneva was actually completed, at the expence of £. 10,000; a charter was granted with very conſiderable privileges; the ſtandard of gold was altered for the accommodation of the watch manufacturers; the foundation of an academy approved, upon an uſeful, extenſive, and œconomical plan *; in July 1783, ſeveral Genevans landed in Ireland; and when the nation had expended near £. 30,000, the project was ſuddenly relinquiſhed, and the ſettlement finally abandoned.

The failure of this project may be principally attributed to the following cauſe.—If the ſettlement could have been immediately carried into execution, the Genevans would have emigrated in very conſiderable numbers; but many neceſſary delays were occaſioned by the arrangement

* The total expence of the academy would, at the higheſt calculation, have amounted to £. 4554 per annum, and at a more moderate valuation to only £. 3924. For this ſum forty-four profeſſors, aſſiſtants, and maſters would have been maintained; a public library eſtabliſhed; and the expences of a ſtudent, in the article of education, would not have exceeded £. 164. 18 s. for thirteen years, or about £. 12 per annum.

of

of ſo complicated a plan, by the high demands of the Genevan commiſſioners, who, in drawing up the charter, required many privileges which were contradictory to the laws of the land, and by the building of the New Geneva. Theſe delays naturally giving time for the reſentment of the Genevans to ſubſide, many returned and took the oaths of allegiance to the new government.

To this circumſtance muſt be added, the departure of Earl Temple, in May 1783, who was the great patron and promoter of the ſettlement; that the project, as it loſt its novelty, gradually became leſs popular; that the few Genevans, who had prematurely landed in Ireland, although maintained at the public expence, yet were diſcontented, at not finding the new town prepared for their immediate reception; and that particularly, as thoſe among the propoſed emigrants who had moſt property had withdrawn their names; the remainder did not poſſeſs a ſufficient capital to ſettle in a foreign country, and to eſtabliſh an expenſive branch of manufacture without ſtill farther aſſiſtance.

In conſequence of this deficiency, the Genevan commiſſioners petitioned to appropriate £. 10,000. of the £. 50,000 for the purpoſe of

forming a capital. But, as that ſum had been voted by parliament for other purpoſes, this petition was neceſſarily rejected; and the Genevans, in an addreſs to the Duke of Rutland, lord lieutenant of Ireland, relinquiſhed the ſettlement; and ſoon afterwards quitted that country.

LETTER 66.

Account of the late Tumults and Revolution of Geneva in 1789.

THE late revolution of 1789 having greatly changed the form of government eſtabliſhed in 1782, and deſcribed in the former letter, I here ſubmit to your peruſal a ſhort account of the cauſes and termination of thoſe tumults, which have been the means of reſtoring Geneva to its former liberty.

The edict of pacification paſſed in 1782 ſucceeded to a long ſeries of diſſenſions between the popular

popular and ariſtocratical parties. The three powers of France, Sardinia, and Berne, by whoſe dominions Geneva is encircled, beholding, with regret and diſpleaſure, the flames of civil diſcord continually ſmothered, and continually burſting forth on the ſlighteſt occaſion, had combined in order to ſettle a *fixed* and *permanent* conſtitution, and took ſuch precautions as ſeemed calculated to prevent in future any effectual oppoſition to the government which they thought proper to eſtabliſh. By the combined forces of the three powers the far greater part of the Genevans were compelled to ſubmit to the moſt grievous conditions: the exile of their popular chiefs, the prohibition of carrying arms, and a foreign garriſon quartered in barracks, at the entire diſpoſal of government, formed the baſis which ſupported the new conſtitution.

From that period a calm of a few years, almoſt unknown to the republic, ſucceeded; but it was a ſullen and a lowering calm: the people were kept in order by the precaution of a military force, not calculated for a ſmall republic; the taxes impoſed for the maintenance of that military force, and for building barracks, were heavy, and their burden was felt the more, be-

cauſe they conſtantly reminded the Genevans of their humiliation and ſubjection.

During my ſubſequent viſits to Geneva, in 1785 and the following year, I found an almoſt general diſcontent prevailing among all parties; many of the Negatives diſaffected; the Repreſentants ſubmitting in ſilent and ſullen deſpair; and the people without ſpirit and energy. The wiſdom of many of the regulations paſſed in 1782 was overlooked, or forgotten; thoſe only which annihilated the firſt principles of liberty were remembered; and almoſt the only ſentiment which prevailed, was the ſentiment of degradation, ariſing from the ſubjection of a free people to a military government.

In this ſtate of affairs and general diſaffection to the ruling party, many of the citizens ſecretly entertained hopes of another revolution; either founding their expectations on the embarraſſed ſituation of France, or on the favourable diſpoſition of the Great and Little Councils, the members of which had for ſome time fatally experienced many difficulties in ſupporting the authority of government. The minds of the greateſt part were ready to take advantage of every incident likely to effect a change of government.

Such a general ſpirit of diſaffection had gone forth

forth among the people, that adminiſtration had been compelled to employ a military force in order to quell a tumult, which took its riſe in the theatre on the 12th of December 1788.

The quelling of this tumult was only a temporary remedy; and the popular diſcontents broke out uncontrouled on the 26th of January, on account of the publication of an edict raiſing the price of bread a farthing in the pound. This augmentation, though juſtified by the ſcarcity of flour, and paſſed principally with a view to prevent the exportation of bread, was yet imprudently laid on in the preſent temper of the people. An inſurrection inſtantly took place; the bakers ſhops were pillaged, and on the following day a carriage laden with bread, and eſcorted by ſoldiers, was plundered in its way to the diſtribution office in the quarter of St. Gervais. The ſoldiers, firing at the populace killed one man and wounded another: the numbers and fury of the rioters increaſed; they drove away the troops, and carried the body of the deceaſed, in a kind of funeral proceſſion, before the town-houſe, as a memorial of violence and oppreſſion. The populace, rouſed to frenzy at this ſpectacle, attacked and occupied two gates of the city, and dangerouſly wounded the commanding officer, as he

was

was endeavouring to reſtrain the ardour of his ſoldiers and the fury of the people.

In all tumults and inſurrections the firſt moments are precious. The magiſtrates, inſtead of acting deciſively, had loſt them in deliberation; and the poſition of government became more and more embarraſſing. On the preſent occaſion it was neceſſary either to retake the gates, which had been occupied by the inſurgents, or to confeſs, that the military force, by which they had hitherto kept the people in awe, was no longer capable of enforcing obedience. The military committee, charged with the command of the garriſon for the ſecurity of the city, fluctuated between their duty to quell the inſurrection, and their repugnance to ſhed the blood of their fellow-citizens. In this dilemma they heſitated for ſome time, and at length ordered two bodies of troops to force their paſſage over the two bridges of the Rhone which ſeparate the quarter of St. Gervais from the remainder of the city, and to retake the gate on the ſide of Switzerland. They flattered themſelves, that the people would retire at the firſt appearance of a conſiderable body of ſoldiers. But it was now too late: the inſurgents had already formed a ſtrong barricade, behind which they played off two fire-pumps, filled

filled with boiling water and ſoap-lees, againſt the extremities of each bridge; the croſs fire of ſeveral ſmall arms, which poured from the windows and tops of the adjacent houſes, wounded ſeveral ſoldiers and killed the commanding officer; the pavement of the ſtreets was torn up, and carried to the tops of the houſes, in order to be hurled down upon the troops, if they forced the barricades and penetrated into the town. Meanwhile the tumult ſpread itſelf into the other parts of the city, and was in danger of becoming univerſal. In this ſtate of affairs the magiſtrates, finding that they could not quell the inſurrection without great effuſion of blood, found themſelves under the neceſſity of complying with the demands of the inſurgents. One of the principal magiſtrates repaired in perſon to the quarter of St. Gervais, proclaimed an edict for lowering the price of bread, granted a general amneſty, and releaſed all the inſurgents that had been taken into cuſtody. Theſe conceſſions reſtored indeed a momentary calm; but produced the very effect they were intended to avoid. The leaders of the diſaffected party, now convinced, either of the inability or unwillingneſs of government to employ a ſufficient degree of force, and foreſeeing that the moderation which had been

juſt adopted muſt be continued, held themſelves in readineſs to take advantage of any opportunity which preſented itſelf of exciting or encouraging another inſurrection, in order to effect a change of government, and a recovery of former privileges. Such an opportunity preſented itſelf on the 29th of January, at the interment of a woman who had been caſually killed by the diſcharge of the military in the tumult of the 26th. An immenſe concourſe of people attended the funeral: and the magiſtrates imprudently ordered the garriſon to be ranged and poſted with cannon, for the ſecurity of the barracks and the city gates againſt any attempts of the multitude. The populace, believing that the garriſon was drawn out in order to recommence hoſtilities, roſe inſtantly, with one accord directed their fury againſt the ſoldiers, drove them from their poſts, diſarmed them, and took poſſeſſion of the city gates without oppoſition.

This ſecond tumult convinced the magiſtrates that all farther oppoſition was fruitleſs. For, as the generality of the citizens and burghers, inſtead of taking an active part in quelling the tumults, had rather ſeemed to countenance and encourage them, it was evident, that the loſs of their liberties, and the humiliation to which they

were

were reduced by the edict of 1782, had abſorbed every ſentiment of affection and reverence for an adminiſtration, which, however juſt and reaſonable in its meaſures and conduct, was founded on the principles of deſpotiſm, and ſupported by force. Impreſſed with theſe conſiderations, and finding by experience that a military government was both inexpedient and ineffectual, the chiefs of the ariſtocratical party ſuddenly changed the ſyſtem, by which they had been hitherto guided, and renounced, by a very extraordinary revolution in their ſentiments, that line of conduct to which they had before ſo obſtinately adhered. They now felt, that in ſo ſmall a republic, and with ſuch new objects of ambition, the only permanent recompence of their political labours could be drawn from the eſteem, attachment, and confidence of their fellow-citizens; they felt alſo, that, acting from that principle, the wiſeſt conduct to be adopted on the preſent occaſion was, to change a conſtitution which had been proved to be eſſentially defective; and which, while it abridged or annihilated the deareſt rights and privileges of a freeborn ſubject, was ineffectual in maintaining itſelf by the uſual companion of deſpotiſm, the terror of a military force. When, therefore, the Solicitor General,

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in the name of the citizens and burghers, ſolicited the recovery of their antient liberties, the permiſſion of bearing arms, the re-eſtabliſhment of the militia, and of their circles or political clubs, the removal of the garriſon from the barracks, and the recall of the Repreſentants, who were baniſhed in 1782; ſuch moderate demands were received with complacency and even ſatisfaction.

The two parties, fatigued with paſt diſſenſions, and anxious to reunite in the common cauſe, conſented to ſacrifice ſomething of their reſpective claims, and to uſe the power reſerved to them in 1782, by the guaranties, of amending and changing the laws, by a majority of three-fourths. The preliminaries were ſettled without difficulty; a committee was appointed to reviſe and amend the edict of 1782; the new edict of pacification, under the title of *Modifications à l'Edit de* 1782, were approved by the Senate, Great Council, and General Council. Such was the almoſt general unanimity with which this buſineſs was tranſacted, that in the aſſembly of the General Council which met on the 10th of February, the *modifications* were carried by 1321 ſuffrages againſt 52. The publication of the new edict was followed by the loudeſt

loudeſt acclamations and general rejoicings, and confirmed by the three guaranties,

The edict of 1782 is valid in all the articles which are not repealed or amended by the preſent *modifications*; or, to uſe the words of the preſent amendments, "The edict of the 21ſt of November 1782, with the modifications introduced by the preſent edict, and the political code publiſhed on the 13th of June 1783, ſhall be the fundamental law of the ſtate, and ſhall form the complete collection of its political ſtatutes."

The conſtitution is now wiſely modelled into a mean between the too popular form eſtabliſhed in 1768, and the too ariſtocratical form eſtabliſhed in 1782.

The magiſtrates have conſented to repeal the moſt obnoxious articles in the edict of 1782; which may be principally reduced to the following heads:

1. The garriſon is ſubject, as before the edict of 1782, to the orders of the Senate, of the Syndic of the Guard, and of the members of the Great Council; and is to be no longer quartered in barracks. The garriſon is to be gradually reduced to 600 men; but to be increaſed to 720, at the will of the Great Council. The officers

ficers are to be choſen by the Great Council, from the citizens, burghers, and natives.

2. The militia to be re-embodied, and the military exerciſes to be renewed. A regiment of volunteers to be formed from the citizens, burghers, natives, and inhabitants, under the orders of the Senate and Syndic of the Guard.

3. All citizens, burghers, natives, inhabitants, and ſubjects, are permitted to bear arms; all other perſons dwelling in the city are prohibited from carrying fire-arms without permiſſion.

4. The circles, or political clubs, are re-eſtabliſhed; but are forbidden to deliberate or vote on the affairs of ſtate or the operations of government.

5. Some additional powers are granted to the thirty-ſix adjuncts, which increaſe their importance, and conſequently the weight of their repreſentations.

6. All perſons baniſhed by the edict of 1782 are to be recalled, if the conſent of the three powers can be obtained; and thoſe, who were deprived of their burgherſhip on account of refuſing to take the oath of allegiance to the government eſtabliſhed in 1782, are to be reinſtated in their rights.

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In return for theſe conceſſions on the part of the magiſtrates, the popular party conſent to the articles in the edict of 1782, which aboliſhed the right of re-election, and transferred the right of repreſentation to the thirty-ſix adjuncts.

They have acted wiſely in renouncing the right of re-election, that ſpecies of oſtraciſm, and ſource of ſo much jealouſy and ſuſpicion, which principally occaſioned the troubles that preceded the revolution of 1782. They have no leſs prudently conſented to aboliſh the right of repreſentation, as it was veſted, before the edict, in every citizen and burgher. The uſe, or rather the abuſe of this right, occaſioned frequent tumults and ſeditions, by the promiſcuous aſſembling of a large number without order; and it was found to be a dangerous expedient to employ a multitude as an engine for political purpoſes.

By the edict of 1782 it was ſtipulated, in favour of the natives, that during the term of ten years five natives, and after the expiration of the ſaid term, three natives, ſhould be annually choſen burghers. On the preſent occaſion a farther clauſe was added in their favour; that the burgherſhip ſhould be conferred on all

natives of the fourth generation, when they ſhall have attained the proper age.

Time can only diſcover whether the preſent form of government will be more permanent than the former conſtitution; or whether a few years may not bring about another revolution. It bears, however, ſtrong marks and characters of permanency, if we may augur from the preſent temper and diſpoſition of the parties.

The alterations are juſt, reaſonable, and even neceſſary.

It is the firſt time that all the orders of the ſtate freely, and as it were unanimouſly, conſented, and that ſcarcely the leaſt diſaffection or murmurs have followed. The revolution of 1768 was the triumph of the popular over the ariſtocratical party; and of 1782, the ſtill greater triumph of the ariſtocratical over the popular party. But the preſent change of the government was accompanied and followed by the triumph of neither party. It was formed by the coalition of both; it was the general ſenſe of the whole republic united, in order to repeal what experience had ſhewn to be defective and inconſiſtent with republican freedom in the edict of 1782; and to retain what ex-

perience had ſhewn to be expedient and analogous to the ſpirit and principles of the conſtitution.

The pacification was inſtantly followed by marks of cordiality and attention, between the individuals of two parties, never before experienced. The ſons of the principal Negatives have frequented the circles of the burghers; the magiſtrates, who could not be reproached with any abuſe of their power ſince the edict of 1782, have obtained the confidence of the people from the moment that they renounced the ſupport of a foreign garriſon quartered in barracks, and expreſſed their reſolution of entruſting the preſervation of the ſtate to the citizens, burghers, and natives.

No monument of that military force, ſo odious and yet ſo uſeleſs, will remain. The barracks of the town-houſe are already evacuated, and will be converted into a public library; the new barracks, built at an enormous expence, and more calculated for the garriſon of a powerful and deſpotic kingdom than for a ſmall and free commonwealth, will be converted into a building for the univerſity. The reformation of the ſtudies, which have ſcarcely received any alteration ſince the time of Calvin, is now in

agitation. In a word, all things ſeem at preſent to conſpire for the general good; and it is to be hoped that both parties, ſhocked at the recollection of paſt troubles, will continue on as friendly terms as the jealous nature of a free conſtitution will admit, and not exhibit any more civil diſſenſions of ſuch notoriety as to endanger the ruin of the republic; diſſenſions which have been hitherto, perhaps, almoſt unavoidable, but which, if renewed in future, will ſtamp indelible diſgrace on the Genevans, as reſtleſs and unquiet ſpirits.

LETTER 67.

General Reflections.

HAVING, in the courſe of my former letters, communicated to you ſuch obſervations as occurred to me during my tour through Switzerland, concerning the laws, government, and ſituation of each canton in particular; I will now lay before you a few concluding remarks, in relation to the ſtate of that country in general.

No part of Europe contains, within the ſame compaſs, ſo many independent commonwealths, and ſuch a variety of different governments, as are collected together in this remarkable and delightful country; and yet, with ſuch wiſdom was the Helvetic union compoſed, and ſo little have the Swiſs, of late years, been actuated with the ſpirit of conqueſt, that ſince the firm and complete eſtabliſhment of their general confederacy, they have ſeldom found occaſion to employ their

arms againſt a foreign enemy; and have been troubled with no civil commotions that were not ſoon happily terminated. Perhaps there is not a ſimilar inſtance in antient or modern hiſtory, of a warlike people, divided into little independent republics, cloſely bordering upon each other, and occaſionally interfering in their reſpective intereſts, having continued, during ſo long a period, in an almoſt uninterrupted ſtate of tranquillity. And thus, while the ſeveral neighbouring kingdoms ſuffer, by turns, all the horrors of war, this favoured nation enjoys the felicity of looking down with ſecurity upon the various tempeſts that ſhake the world around them.

But the happineſs of a long peace, has neither broken the ſpirit, nor enervated the arm of the Swiſs. The youth are diligently trained to martial exerciſes, ſuch as running, wreſtling, and ſhooting both with the croſs-bow and the muſket; a conſiderable number of well-diſciplined troops are always employed in foreign ſervices; and the whole people are enrolled, and regularly exerciſed in their reſpective militia. By theſe means they are capable of collecting a very reſpectable body of forces, which would prove formidable to any enemy who ſhould invade

their

their country, or attack their liberties. Thus, while moſt of the other ſtates upon the continent are tending towards a military government, Switzerland alone has no ſtanding armies; and yet, from the nature of its ſituation, from its particular alliances, and from the policy of its internal government, is more ſecure from invaſion than any other European power.

The felicity of Switzerland, however, does not conſiſt merely in this peculiar exemption from the burdens and miſeries of war; as there is no country in which happineſs and content more univerſally prevail among the people. For, whether the government is ariſtocratical, democratical, or mixed; a general ſpirit of liberty pervades and actuates the ſeveral conſtitutions: even the oligarchical ſtates, which are uſually the moſt tyrannical, are here peculiarly mild; and the property of the ſubject is in general ſecurely guarded againſt every kind of violation.

But one general defect prevails in the criminal juriſprudence of the country. For, although the Caroline code, as it is ſtyled, or the code of the Emperor Charles the Fifth, forms in each of the republics the principal baſis of their penal laws, with particular modifications and additions in

different diſtricts; yet much too great a latitude is allowed to the reſpective judges, who are leſs governed in their determinations by this code, or any other written law, than by the common principles of equity. How far long experience may have juſtified the prudence of truſting them with this extraordinary privilege, or how far the ſeverity of the Caroline code renders it neceſſary, I cannot ſay; but diſcretionary powers of this kind, are undoubtedly liable to the moſt alarming abuſe, and can never, without the greateſt hazard, be committed to the hands of the magiſtrate.

Upon this occaſion, I cannot forbear reflecting on the ſuperior wiſdom, in the preſent inſtance, as well as in many others, of our moſt invaluable conſtitution; and indeed, it is impoſſible for an Engliſhman to obſerve the governments of other countries, without becoming a warmer and more affectionate admirer of his own. In England, the life and liberty of the ſubject does not depend upon the arbitrary deciſion of his judge, but is ſecured by expreſs laws, from which no magiſtrate can depart with impunity. This guarded preciſion, it is true, may occaſionally, perhaps, be attended with ſome inconveniences; but they are overbalanced by

advantages

advantages of ſo much greater weight, as to be ſcarcely perceptible in the ſcales of juſtice. I do not mean, however, to throw any imputation upon the officers of criminal juriſdiction in Switzerland: as far as I could obſerve, they adminiſter diſtributive juſtice with an impartial and equitable hand.

I remarked, with peculiar ſatisfaction, the excellent ſtate of the priſons, and the humane precautions which the ſeveral legiſlatures have adopted in relation to felons: a circumſtance that ſtruck me the more forcibly, as the contrary is but too viſible in England. In Switzerland, the criminals are confined in wholeſome and ſeparate wards; and inſtead of languiſhing in priſon, to the great injury of their health, or total waſte of their little remnant of money, are almoſt immediately brought to trial. In England, an accuſed perſon may be confined ſix months, or more, before his fate is determined: and if he is proved innocent, and ſhould be in low circumſtances; the loſs of his time, together with the expences of the jail-fees, may probably occaſion his utter ruin; while his morals are in no leſs danger, by being compelled to aſſociate with a ſet of abandoned wretches, loſt to all ſenſe of ſhame, and encouraging

couraging each other in their common profligacy. How much is it to be lamented, that, while our code of criminal juriſprudence is in general formed upon principles, which diſtinguiſh us with honour among the nations of Europe; that our courts of juſtice are thrown open to the view of all the world; and that we enjoy the ineſtimable and almoſt peculiar privilege of being tried by our equals; how much (I cannot forbear repeating) is it to be lamented, that the ſame equitable and humane ſpirit ſhould be found wanting in ſo important an article of our penal laws!

For a more particular account of the priſons in Switzerland, I would refer you to my friend Mr. Howard's publication * on the ſubject. In this work the benevolent author has given many melancholy inſtances, that the Engliſh jails are much inferior to foreign priſons in cleanlineſs and good government. He muſt, however, feel the moſt ſenſible ſatisfaction in finding, that his labours have already produced ſeveral advantageous regulations, particularly concerning the fees of priſoners who ſhall be

* The State of the Priſons in England and Wales, &c. &c. Third edition, 1784. And an account of ſome foreign priſons.

acquitted,

acquitted, and the prevention of the gaol diſtemper. And although much ſtill remains to be effected, yet it may juſtly be hoped, that the attention of the Britiſh Senate will be effectually fixed upon an object ſo highly deſerving the care of every wiſe and humane legiſlature.

It is a matter of aſtoniſhment, as well as of concern, to find, that in a country where the true principles of civil government are ſo well underſtood and ſo generally adopted as in Switzerland, that the trial by torture is not yet aboliſhed: for, in ſome particular caſes, the ſuſpected criminal is ſtill put to the rack. The inefficacy, no leſs than the inhumanity, of endeavouring to extort the truth by the ſeveral horrid inſtruments which too ingenious cruelty has deviſed for that purpoſe, has been ſo often expoſed by the ableſt writers, that it would be equally impertinent and ſuperfluous to trouble you with any farther reflections upon the ſubject: and indeed, the whole ſtrength of the ſeveral arguments urged upon this occaſion, is compriſed in the very juſt and pointed obſervation of the admirable la Bruyere, that *la queſtion eſt une invention merveilleuſe & tout-à-fait ſûre, pour perdre un innocent qui a la complexion foible, & ſauver*

*ſauver un coupable qui eſt né robuſte**. I cannot, however, but add, in juſtice to the Swiſs, that zealous advocates have not been wanting among them for the total abolition of torture: but arguments of reaſon, and ſentiments of humanity, have been found, even in this civiliſed and enlightened country, to avail little againſt inveterate cuſtom and long-confirmed prejudices †.

During

* Caracteres, Vol. ii. p. 203.

† Criminal juſtice is here, as in the greateſt part of Europe, adminiſtred agreeably to the rules of the civil law. According to the maxims of that code, the criminal's confeſſion is abſolutely requiſite for the infliction of capital puniſhment; and conſequently, all thoſe nations, which have not eſtabliſhed a new code of criminal juriſprudence, retain the uſe of torture.

The preſent king of Pruſſia ſet the example, in Germany, of aboliſhing this inhuman practice; but few, perhaps, are appriſed, that the firſt hint of this reformation was ſuggeſted to him by reading the Hiſtory of England. For, one of the principal arguments in ſupport of this method of extorting confeſſion, being, that it affords the beſt means of diſcovering plots againſt government; the ſagacious monarch remarked, that the Britiſh annals fully confute the fallacy of that reaſoning. Few kingdoms, he obſerved, had abounded more in conſpiracies and rebellions than England; and yet the leaders and abettors had been more ſucceſsfully traced and diſcovered, without the uſe of torture, than in any country where it was practiſed. "*From thence,*

During my ſubſequent expeditions into Switzerland in 1785 and 1786, I was extremely happy to find, that the abſurdity as well as inhumanity of torture was more generally admitted. It has long been ſuppreſſed in Geneva; in many of the ariſtocratical cantons it is virtually, though not formally abandoned; and, as I have before had occaſion to obſerve *, its public abolition in Berne forms a diſtinguiſhed æra in the hiſtory of Swiſs juriſprudence, and, it is to be hoped, is the prelude to its total diſuſe throughout Switzerland.

Learning is leſs generally diffuſed among the catholic than the proteſtant ſtates: but in both, a man of letters will find abundant opportunities of gratifying his reſearches and improving his knowledge. To the natural philoſopher, Switzerland will afford an inexhauſtible ſource of entertainment and information, as well from the great variety of phyſical curioſities ſo plen-

" *thence,*" added this wiſe politician, " *I ſaw the abſurdity* " *of torture, and aboliſhed it accordingly.*"

This anecdote, which I received from very reſpectable authority, bears the moſt honourable teſtimony to the efficacy as well as the mildneſs of our penal laws, and to the ſuperior excellency of the proceſs obſerved in our courts of criminal juſtice.

* Letter 56.

tifully

tifully ſpread over the country, as from the conſiderable number of perſons eminently ſkilled in that branch of ſcience. Indeed in every town, and almoſt in every village, the curious traveller will meet with collections worthy of his attention.

With reſpect to agriculture; there are, perhaps, few countries, wherein the advantageous effects of unwearied and perſevering induſtry are more remarkably conſpicuous. In travelling over the mountainous parts of Switzerland, I was ſtruck with admiration and aſtoniſhment, to obſerve rocks, that were formerly barren, now planted with vines, or abounding in rich paſture; and at marking the traces of the plough along the ſides of the ſteepeſt declivities. In a word, the inhabitants ſeem to have ſurmounted every obſtruction of ſoil, ſituation, and climate; and to have ſpread fertility over various ſpots, which nature ſeemed to have conſigned to everlaſting barrenneſs. In fine, a general ſimplicity of manners, an open and unaffected frankneſs, together with an invincible ſpirit of freedom, may juſtly be mentioned, in the number of thoſe peculiar qualities which dignify the public character of this people; and diſtinguiſh them with honour among the nations of Europe.

I have

I have now laid before you the principal obſervations which occurred to me in my journey through Switzerland: happy! if they may in any reſpect have contributed to your information or amuſement. They were originally intended merely as a private memorial of friendſhip; but I have an additional ſatisfaction in this opportunity of publicly teſtifying the ſincere eſteem and regard with which I am,

Dear Sir,

Your very affectionate,

and obliged friend,

WILLIAM COXE.

END OF THE SECOND VOLUME.

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